PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.
MAR 11 1924

Teachers College RECORD

Volume XXV, Number 2 March, 1924

Edited by JAMES E. RUSSELL

CONTENTS

Publicity for the Public Schools *Rollo G. Reynolds* 89

General and Specific Effects of Training in Reading *Arthur I. Gates and Dorothy Van Alstyne* 98

Educational Activities of the Y. M. C. A. in New York City *Franklin W. Johnson* 124

Disciplinary Values of Studies in the Opinion of Students *E. L. Thorndike* 134

An Experiment in a Rural School *Fannie W. Dunn and Marcia Everett* 144

New Studies in Education 156

College News 167

Alumni Activities 172

Bureau of Publications
Teachers College, Columbia University
New York City
$1.50 a year $0.40 a copy

TEACHERS COLLEGE RECORD

VOL. XXV, NO. 2 MARCH, 1924

JAMES E. RUSSELL, *Editor*
Dean of Teachers College

CLYDE J. TIDWELL, *Managing Editor*
Director, Bureau of Publications

This journal is issued by-monthly except July, thus having five numbers during the year—January, March, May, September, and November. The subscription price is $1.50 per year; foreign postage, 25 cents; Canadian postage, 15 cents. Single numbers are 40 cents each, postpaid. A discount of 20 per cent is allowed on an order for five or more copies or subscriptions, if remittance in payment is sent with order.

A list of the back numbers of the RECORD will be sent on request.

Make money orders payable to TEACHERS COLLEGE and address all orders to TEACHERS COLLEGE RECORD, 525 WEST 120TH STREET, NEW YORK.

NOTICE TO SUBSCRIBERS: Notify the TEACHERS COLLEGE RECORD promptly of any change of address; otherwise copies lost in transit will not be duplicated.

Entered as second class matter at the New York, N. Y., Post Office, June 11, 1900, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on August 6, 1918.

Copyright, 1924, by TEACHERS COLLEGE, Columbia University.

HOW TO MAKE A CURRICULUM
By Franklin Bobbitt

This book will give superintendents, principals, teachers, and all students of education, the large view of education,—its objectives and ways of achieving the desired results. The book embodies the plan of approach to the problems of curriculum improvement that was employed recently by the author in Los Angeles. It shows the immediate improvement that may be harmoniously effected in a course of study, but the emphasis is upon the ultimate goal of education for life, to which our American schools are directed. $1.80.

ELEMENTS OF EDUCATIONAL PSYCHOLOGY
By Lawrence Augustus Averill

Elements of Educational Psychology is especially designed as a text-book for teachers who have had a general introductory course in psychology. Such topics as easily lend themselves to the purpose have been subjected to experimentation, the technique of which has been kept as simple as possible. There are copious illustrations and examples, and a minimum of carefully selected references, the study of which as indicated after each lesson will provide the student with an excellent background of educational psychology of the practical sort. The book is planned to cover a full semester course. *Riverside Textbooks in Education* $2.15.

HOUGHTON MIFFLIN COMPANY
BOSTON NEW YORK CHICAGO SAN FRANCISCO

TEACHERS COLLEGE RECORD

VOL. XXV MARCH, 1924 NO. 2

PUBLICITY FOR THE PUBLIC SCHOOLS

By ROLLO G. REYNOLDS

Assistant Professor of Education, Teachers College

If the theory of democracy is followed through, the schools of a community ought to be whatever the citizens of any school unit wish them to be—no better, no worse. The careful superintendent of schools under these conditions gives to his community, in so far as he is able, the kind of schools that it wants. If he can interpret the school wishes of his people he is considered successful in that community. Some superintendents create better schools than the community can understand. They drive the schools ahead until the inevitable reaction takes place. The wise superintendent of schools utilizes his energy and ability in two ways: he gives the citizens the kind of schools they want as nearly as he can: he makes them want better ones.

This last type of school administrator is rapidly increasing. Wherever we find him we find steady progress in school matters. In order to create in the citizens, who immediately control the schools which he administers, a desire for better schools, he is using wisely and skilfully that process known as publicity.

The purpose of publicity is perhaps best expressed by the chief school officer of one of our state school systems, Mr. Albert S. Cook of Maryland, who prefaces a 90-page bulletin entitled "Publicity" and distributed to every teacher in the state, with this statement:

> "To see to it that the general public is at all times informed of the purposes, activities, and accomplishments of the schools is both a *professional opportunity* and a *professional obligation.*"

In the official publication of the Board of Education in Detroit, publicity is recognized as one of the three forces upon which better schools depend.

> "Education must continue to progress until it occupies its rightful position as one of the most important social activities of the

> commonwealth. This may be brought about through 1, Organization; 2, A Program; 3, Publicity. The most potent factor after the organization has been perfected and the policies adopted and developed, is the bringing of these facts to the attention of the public in compelling fashion. The success of education in Detroit, in Michigan, and in the United States depends upon our ability to reach and convince the people of education's accomplishments and needs."

Another great public school system, that of Cleveland, has as one of its administrative units a division of publications, one of the functions of which is to see to it that the people of that city are kept informed concerning their public schools.

This process of publicity is not confined to the large educational units. Many small school systems in towns which boast only a weekly newspaper, are being administered by superintendents who, appreciative of the necessity for understanding on the part of their citizens, are securing each week for their patrons a full page in the newspaper, telling the story of the schools of that community. Savannah, Illinois, has been carrying on for several years a program of publicity for its public schools based on the slogan "If you can make public opinion right your schools will be right."

That the people themselves are interested in public education is indicated by the large number of articles constantly appearing in magazines on this subject. In the September, 1923 issue of the Journal of the National Education Association an annotated bibliography of 40 such articles appearing during 1923 in magazines of national circulation was printed. The World's Work, beginning with the September, 1923 issue, is publishing a series of ten articles, which present to the people of this country in this magazine with a national circulation a running survey of "What's Good in the American Public Schools." These examples are evidence that public school publicity is a fact—not merely a theory. In many communities throughout this country, large and small, wise school administrators are taking along with them in their administration of the public schools the citizens to whom after all the public schools belong and without whose support educational progress in the long run cannot be made.

James Harvey Robinson says that "Democracy means taking everyone into the game. Good school publicity means just that."

Publicity for the public schools is not a new thing. There has always been considerable of it. Probably there is no institution about which a community quarrels more often. One can step off the train in almost any American city and walk straight into a school fight.

The difficulty is not so much with the quantity of publicity relative to the public schools as with the kind of publicity.

The information which the public has received concerning its schools has been mostly accidental—at best incidental. This means that in the minds of most school administrators there has been no "purpose" for publicity and consequently no plan or program. There are three types of publicity which have taken to the people their message about the schools and have done much harm:—scolding, scandal, and self seeking.

Scolding sometimes seems to be an attribute of the schoolmaster. Too frequently he tells his school story to his people in this vein. His psychology is wrong. He should learn from business. It is said that the advertisements for O'Sullivan's Rubber Heels have been entirely changed in recent years. You will remember that they used to stress the *bad* effects of *not* wearing rubber heels—and they portrayed in their advertisements tired, pavement-shocked nerves, untidy, run over shoes, and rather scolded the public who did not endorse, by purchase, O'Sullivan's rubber heels. The new advertising policy leaves out the bad and portrays lads and lassies tripping in buoyancy along sun-streaked sidewalks, the eager business man, the cheerful housewife, all walking to happiness, on the wings of O'Sullivan's.

Scandal furnishes some of the information which the people receive about their schools. This is natural so long as the press remains a vehicle for news. The newspaper reporter who sees a dog bite a man pays no attention to the fact, but if he should see a man bite a dog he writes it up for the front page. This may be deplorable—but it is a fact that we have to face. When things go wrong with the schools—that's news! Wise is the superintendent of schools who sees to it that the "wrong" things are not the only ones the newspaper gives its readers about the schools.

Self seeking furnishes the motive for some school publicity. In a recent compilation of suggestions for school publicity given to school men by one hundred representative editors of daily papers, a warning against publicity for self-glorification is emphasized.

It has been suggested that school publicity needs a purpose and a program. No two elements are more needed.

All school publicity, like any other educative activity, should be measured by the foot rule of the effect which it will have upon the boy and girl in the school. If it can not be tied up to the child it has no place in the school process. A publicity purpose which does have as

its aim the benefit of the child is a pretty good purpose to set up for the consideration of those who are responsible for the daily newspaper. If a superintendent can get newspaper men to share in school publicity with such a purpose, school scandal news would appear less often. On the other hand, self-glorification—self-seeking publicity would find no place in such a publicity program.

It has also been stated that much school publicity is accidental, or at best incidental. This is due to the fact that most school administrators have for their publicity no program, no plan. In those school communities where the obligation and opportunity of keeping the public informed concerning the public schools is considered one of the administrative responsibilities of the superintendent, one finds that this publicity process has a definite program and is planned as carefully as any other administrative function. Without such program this information service will be haphazard at best.

In planning a program of publicity several things should be considered. There are two kinds of school publicity: first, *Special Purpose Publicity*. By this is meant the "drive": the short time, intensive campaign to persuade the people into doing something desperately needed. We are all familiar with this kind of publicity. The stress of war made it necessary to get all sorts of things done, from the recruiting of soldiers, and the selling of Liberty Bonds, to the observing of gasless Sundays and the eating of war bread. It is an emergency method. School systems have resorted to it often. Bond issues, increases in school tax levies, more pay for teachers, all have been accomplished many times by this special drive method. It is not to be condemned. But it has brought upon those who handle the affairs of public education the criticism that we never inform the people about the public schools unless we want something—usually money. It has lent itself in the past to considerable scolding and to the display of the deficiencies in our public schools, their plants and their equipment. It is probably safe to say that such publicity always makes some enemies.

The second kind of school publicity is of such a nature that, if it were carried out over a period of years, "drives" would not in most cases be necessary. It is long-time, steady, organized publicity. For want of a better name it can be called *Continuous Information Service*. It is based upon the principles which have been already set forth—namely, that the administration of a public school system implies a stewardship which in turn demands an accounting to those whose public

servants school teachers are; that keeping the citizens of a community informed about their schools is "a professional obligation and a professional opportunity." It means telling to the community the story of the public schools, day by day, week by week, year by year, to the end that the American community which is properly informed relative to the achievements, progress and needs of its schools will provide properly for those needs and thus ensure further achievements and progress. The idea of this continuous campaign is expressed in an editorial from the Cleveland School Topics, the official house organ of the school system, October 26, 1920, issued just previous to a city vote on a school bond issue.

> "In a sense it is to be regretted that it is necessary to carry on a campaign to obtain sufficient funds to enable the schools and the city to render normal service and meet the constantly enlarging needs created by Cleveland's rapid growth. Under ideal conditions the people of the city would be so well informed concerning the situation of schools and city, financial and otherwise, that 'drives' to obtain money for vitally needed activities would be unnecessary. Though the people of Cleveland are as public-spirited as those of any community in America, they are not sufficiently informed to make the present campaign for school and city financial relief unnecessary. So far as the schools are concerned, it should be an aim of every teacher and especially of every school principal, to keep the work and interests of the schools before the parents. As we come nearer and nearer to attaining this aim, the schools will receive in constantly increasing measure the sympathetic understanding and the cordial support of the public. This happy condition is not to be reached through spectacular campaigns. It must be founded on actual knowledge of what is being done by the schools, and the dissemination of such knowledge is a day-in-and-day-out, a year-in-and-year-out activity for all school executives and the entire teaching corps."

The remainder of this article will confine itself to this continuous-information service kind of school publicity, and will deal with telling the story of the schools to a community as that story unfolds. The school administrator who contemplates telling this school story constantly to his people will have to consider at least five things:

Somebody to tell it.
Somebody to tell it to.
Something to tell it in.
Something to tell.
The best way to tell it.

Expressed in a different fashion the school man who plans to put across a continuous publicity program must

Perfect a publicity organization
Analyze his listeners or "customers"
Select and secure his publicity agencies and media
Choose his publicity material
Learn how to prepare it for publicity purposes

The most important fact about an organization for publicity in a school system is that it is essential to any effective publicity program. The school story will not tell itself. We have too long bemoaned the fact that we cannot bring the community to the school. If that is impossible in any great degree, and most of us will agree that it is, the next move is to bring the school to the community, and that demands an organization. The type and size of such an organization will depend upon local factors. Perhaps no two organizations will be alike. In general, however, they can be of two kinds.

First, a *Centralized Publicity Organization.* This type heads up in some responsible executive. The executive may be a publicity director whose whole time is devoted to publicity matters. The school system of Cleveland has such an executive. It may head up in the superintendent of schools himself and be one of his administrative duties. An assistant superintendent, a supervisor, a principal, or a teacher may be selected to have charge of publicity. Whoever it may be he should be given time for this duty and held responsible to the superintendent of schools as is any other employee.

A second type may be called a *Representative Publicity Organization.* This type will be headed up by a School News Committee. This committee may be made up in various ways. It may represent the various departments of the school system, such as Elementary Education, Vocational Education, and so on. It may represent the various schools in the system. The local school situation will determine best how it should be made up. Such an organization gives to the teaching staff an opportunity to share in one of the administrative responsibilities of the school system.

In either type of organization there should be an advisory board or cabinet. On this board for example, there should be representatives from the school administration, the teaching staff, patrons of the school, allied organizations, and possibly the children themselves. By all means representatives of the local press should be included.

The next important matter to be considered most carefully by those in charge of a school publicity program is the group or groups toward

whom this publicity is to be directed. The commercial world has long since analyzed its customers and deliberately directs its publicity or advertising toward certain specific groups. If you will turn the advertising pages of almost any magazine and compare the advertisements, for example, of *Velvet Joe Tobacco* with those of *Tecla Pearls,* this principle will be evident. There are in every community certain definite groups. The interest of each of these groups in the public schools is desirable. That which will interest them is as varied as are the groups themselves. The school man, when he has written, has been trying to write to the general public. There is no such thing. He has, however, not even been writing to this mythical group. His annual reports, and even his newspaper articles in most cases, are not even understandable to the "average man of the street" if such there be. His language is highly technical, his sentences long and involved, his style heavy and ponderous. He tells his story successfully to only one group—the group which he himself understands. The first task of a successful educational publicity man is to analyze his readers, tell a story that will hold their interest, and tell it in the language that they can understand.

The next problem which we confront in our program is to find something in which to tell our story. There are certain agencies and media within the school organization itself. The official bulletin or house organ, where it exists, is a means of telling our story to the teaching staff and to a certain selected group of citizen leaders perhaps. Well-devised curricula, assemblies, posters, and so forth, are means of bringing to the children the facts they should know. No better agency for telling the school story exists than the school itself. All sorts of outside organizations appreciate the effectiveness of this agency and strive constantly to get their story into the public school. During the war when the Government wanted to bring a message to the homes of America it constantly did it by means of the children in America's public schools. The annual report might be made a splendid medium of information—especially if it were printed as a series of small bulletins throughout the year.

The story of the public schools can be brought to certain distinct groups by providing educational programs for various, social, civic, fraternal, and patriotic societies. The best medium, however, for reaching all the people of a community is the public press. It shares with the church and the school in educating any community's citizens. The school man in the past has misunderstood the press. In general,

newspapers are eager for news of the schools. In the first place the school is full of those "human interest" stories so dear to the heart of a newspaper man, and in the second place newspapers like to print what their readers like to read. In any city a large proportion of any newspaper's subscription list consists of citizens who, through their children, are interested in the schools.

The next question which we must answer is: "What shall we tell about?" To answer that question is not so easy. At any rate, we must tell them about something which will interest them—which they will read. All the articles in the world are of no use if no one reads them. Various groups in a community will be interested in various things, and to find something in the story of the school which will be of interest to each or all is a task worthy of the best publicity man. People are often interested in the things which they grumble about. Did you ever hear these complaints in your community?

> "The Three R's are being neglected for fads, frills and folderols."
> "A high school education trains children away from the farm and the neighborhood."
> "Teachers' salaries are too large."
> "Children cannot spell as well as they could in the old days."
> "There is too much centralization of authority in the county board of education."
> "The schools are not thorough in their teaching; they attempt to teach too many things."
> "Discipline today is spineless."
> "Supervision of schools is a needless expense."
> "Getting an education once was a stern business. Today it has been made a grand frolic."
> "Teachers have a soft job—they do not have to work as hard as people in other professions."
> "The schools are costing too much."

These critics of ours who learned to read by the A. B. C. method may be interested to learn of new methods and the reasons for them. Those who got their physical training on the farm or in the street after school, might listen to good arguments presented to persuade them that they should pay good money to have their children get this training in school. When they went to school the teacher's wage was $2.50 a week and board round. Have you compared for them the teaching wage of the teacher with that of the blacksmith, the nurse, the plasterer, or even the hired girl?

They are positive that their children cannot spell as well as they could. Have you told them of the old examination papers in spelling which were written in 1846 and found 60 years later in the attic of an old school house in Springfield, Mass.? Have you told them how these

words have been given to children of the 8th grade all over this country, and that they have universally done better than did their 8th grade forefathers? Or in case that fails to convince the critics, have you had the ingenuity to do what a county superintendent of schools in Maryland did? He says:

> "I had the children in one of our most progressive communities challenge their parents to spell against them. Fifteen parents and fifteen children stood up on opposite sides. I pronounced the words. The parents all went down with nine children still spelling. The character of the contest and the results were given much newspaper space. Since that evening I have not heard anybody in the county brag about the spelling of adults."

We have something to tell. There is no doubt of that. The public schools are *full* of stories—good stories, interesting stories. The effective publicity organization will find plenty of things to tell about.

The last and most difficult task, which we are considering about publicity is the best way in which to tell the school story. Writing for publication, especially newspaper publication, has a technique all its own. This technique or style is one which most school people have not mastered. The newspaper editors accuse us of being verbose; they tell us that we are too technical in our language; they say we are prone to follow the essay form; they insist that we have not learned news values. Whether this be true or not it is certain that if we are to utilize certain media for school publicity, we must learn to use their language and style. We must, above all, be interesting. We must learn to talk to our various groups in the language which they can understand. We must admit, at the start, that a long involved article phrased in the technical language which we have built into our profession will not be of great interest to the lay public. The best way to tell our story so that it will create interest and be understood, we must learn. Without it our efforts will be futile.

There is some attempt on the part of school men to imitate the method of commercial advertising. We sometimes hear the plea that we must "sell" the schools to the public. This attitude is perhaps unfortunate. We do not have to "sell" public education to the people. It is one of the corner stones upon which this country is built. We do, however, have a greater responsibility—that of recognizing that without the support of the citizens no public school system can progress long. A sane, planned, dignified program of information is one of the agencies which we can create and carry forward, to the end that America's citizens will demand for their children better schools than they have ever had.

THE GENERAL AND SPECIFIC EFFECTS OF TRAINING IN READING WITH OBSERVATIONS ON THE EXPERIMENTAL TECHNIQUE *

By ARTHUR I. GATES [1]

Associate Professor of Education, Teachers College

and DOROTHY VAN ALSTYNE

Research Assistant, Teachers College

That "reading" is not a single or unitary power but merely a name for a large number of abilities, more or less specifically acquired, even if positively intercorrelated, is now rather commonly recognized. Reading is reacting. The number of reactions that may be made to the printed word by a well-trained adult is large, with ever remaining possibilities of addition and combination.

Extreme cases will make the distinction clear. Contrast reading a manuscript for the purpose of getting the outstanding ideas with 'proof-reading.' Either of these types of reading may be further subdivided; each constituent ability must be, perhaps, mainly specially acquired. A wide reader may be a poor proof-reader. In his earliest efforts, he will experience difficulty in detecting misspelled words, errors of punctuation and grammar, the mistakes and defects in type, inconsistencies in mechanical composition and rhetoric. He may find it difficult enough at first to detect misspellings alone but this ability usually develops rapidly with specific practice. To react effectively to several types of errors in a manuscript is at first impossible, but such ability may be acquired like other "hierarchies of habits" familiar in typewriting, telegraphy, and other functions, the learning of which has been subjected to experimental analysis. Thus the skilled proof-reader may be simultaneously sensitive to errors and inconsistencies of

* From the Research Department of the Horace Mann School of Teachers College. In this paper are not included certain outcomes of the study which, because of their technical character, will be published elsewhere.

[1] With the cooperation of the following teachers in the Horace Mann School: Miss Mary E. Baker, Miss Jean Betzner, Miss Elsa Beust, Miss Ida M. Robbins, Miss Margaret Condry, Miss Honora M. Frawley, Miss Marie Hennes, Miss Mary F. Kirchwey, Miss Mary R. Lewis, Miss Ethel M. Orr, Miss Mary G. Peabody, and Mrs. Siegried Upton.

many types. Conceivably a year of service by the professional proof-reader results in little gain in knowledge of, or capacity to comprehend, the type of material handled daily.

Comprehension is likewise little more than a convenient title for a list of mental reactions which may be made to printed material. We may read in innumerable ways to satisfy different purposes. To give a few examples: 1. We may read primarily to grasp the thought—to comprehend the bare facts given—but there are many forms of this type of reading. We may read unselectively, giving all words or ideas equal weight, or attempt to single out several main ideas, to perceive the logical outline, to detect the main idea, the topic sentence, the key phrase or word. In any of these cases, we may read with a passing interest merely, for temporary or more permanent retention. Teachers' requests to "read this so you can tell me all about it"; "read this so you can write an outline afterward"; or "read this to get the main idea," doubtless elicit quite different reading reactions among experienced pupils. Reading the directions for making a cake, or using a vacuum cleaner; reading the legends of pictures, graphs or maps; reading problems in arithmetic or chemistry may demand specific items of technique.

2. Re-reading affords opportunity for many types of skill—speed in skimming, flexibility in changing pace, skipping from place to place. Such abilities are doubtless variously combined when our purpose is to review evenly, now carefully, now sketchily; to pick up the thread of a story, to detect parts earlier overlooked, to verify an outline or a general impression.

3. Reading may be conducted to secure data bearing on some particular issue, to answer some definite question or assuage some doubt. Thus the teacher may ask the pupils to read a passage to answer some specific "Why," "When," "Where," "What" or "How"; or she may ask them to read for any information bearing on the question of immigration. The adult reads not only to find facts to meet particular problems, but often to find anything that meets any one of many general needs. Thus the advertising writer reads widely, ever alert for "hunches" for a new display or selling talk; the student of education reads a book on ethics or biology, alive to points which may have an educational implication, or he reads a series of technical articles in the hope that a good problem for research may be suggested.

4. We may read mainly to recollect, to supplement the passage, as when we allow our mind to drift, while reading a poem, to scenes, persons, conversations, activities, which are merely suggested. These

reactions may be more active, at least more forced, when our problem is to recall historical events or other poems which are relevant or similar and more restricted when we must attempt to "read between the lines," to divine the purpose of a letter, or discover the significance of an allegory or the moral of a fable. These are types of interpretative reading of the factual type that involves mental reactions quite distinct and probably more complex than plain comprehension. Interpretative reading may, and often does, involve anticipation—what is coming next, how will the story end, to what conclusion is the argument leading. All of these are types of reading purposes well worthy of attention in school.

5. One may read with reaction more emotional than intellectual, although both are usually combined. One may read mainly for a thrill of mirth, grief, anger, or excitement, to suppress or intensify melancholy. To ask "What is the emotional tone of this passage?" may give us a mental adjustment which may result in reactions to features unnoticed at other times. Similarly we may read to detect the rhythm, the literary style, and each of these types of reading is a fine art to which a lifetime of cultivation may be devoted.

These are not all of the kinds of reactions which may be evoked during "reading." Doubtless many who read these pages may be able to draw up a longer and better list. If they try they will be more impressed with the complexity and diversity of reading reactions that are, or may be, acquired.

The nature of these activities, especially their interrelations, how they facilitate and antagonise each other in practice, how the development of one influences the development of others, and what are the most economical and interesting teaching devices, are problems, practically important, on which we have but meagre direct evidence. Where guidance is needed, we must fall back upon general principles derived from studies of materials, such as perception of letters or digits, memorizing words or nonsense syllables, Latin, formal grammar or geometry, which are remote.

An experiment was designed, therefore, to ascertain some of the facts concerning the general and specific effects of training certain types of reading reactions. It is essentially an experiment in the transfer of training essaying to answer the question: How much and in what manner does the development of one type of reading ability influence other types? One of our main problems, however, was to evaluate certain forms of experimental technique by means of which

further investigations, more extensive in scope, may be most satisfactorily pursued.

The pupils of the third, fourth, fifth, and sixth grades of the Horace Mann School served as subjects. There were three classes in each grade, two approximately equivalent and a third a half-year advanced.

The "control group" technique was adopted. To all of the groups was given a battery of tests, to which transfer was to be measured, at the beginning. One class in each grade was then given specific training in one form of reading; another in a second form of reading, and a third, the "control group," was given no special training during the practice period. At the end of the training period, all of the groups were given the same battery of tests as was used at the beginning. The specific improvement in two types of practice, the transfer of each to other functions could then be ascertained since the control group provides a measure of improvement due to regular school or home work, to general growth, and to improvement in scores on the initial and final tests attributable to those experiences alone.

Types of Training

1. *The Paragraph-Question Method.* One class in each of the four grades was given daily training in reading paragraphs for the purpose of answering questions concerning the important facts. The material consisted of 85[1] paragraphs, each containing in the vicinity of 10 lines, mimeographed one on a sheet, 8½ x 11 inches. The selections were chosen (most of them rewritten from originals selected from Children's books) by the following criteria: They must be interesting and of suitable difficulty; they should be of factual rather than fictional content—most of them related interesting facts about animals, nature, science and travel; they must possess distinct unity; that is, each paragraph must contain only related and well-organized data and be a complete unit in itself. There were several series of such units falling under a single topic.

Each paragraph was followed by five questions concerning important facts in the passage which could be answered by a few words or by six statements to be answered by underlining the word "true" or "false."

The pages were assembled and bound into covered booklets, one for each child. At the end of each practice period, the booklets were

[1] Grade 3 used 36 paragraphs, the others being judged too difficult by the teachers.

collected, scored, and on the next period returned to the owner. For all grades the paragraphs were assembled in such a way that the easy and difficult passages were scattered at random throughout.

Practice consisted in reading the paragraphs and answering the questions as accurately and rapidly as possible during daily periods of ten minutes. When time was called each day, the pupil marked the place at which he was working with the date, placing in the booklet a marker to facilitate its discovery later. Next day the pupil began where he left off; often it was necessary to re-read the paragraph partly completed the preceding day.

The booklets, collected at the end of each period by the teachers, were scored according to a key booklet which allowed a wide margin for the teacher's judgment. Before each new practice period, the pupils were afforded an opportunity to study their errors and record the quantity of their achievement. They were encouraged to improve. The arrangements permitted each pupil to progress as well and as rapidly as he was able until the book was completed.

This type of training will be designated as the Paragraph-Question, or the P.Q. method. One score was the number of questions correctly answered; it represents the rate and accuracy with which material of uniform difficulty may be comprehended, in the sense of perceiving the important facts presented. A second score was the number of lines read per period; it represents speed without regard to comprehension.

2. *Rapid Reading with Oral Recitations.* For materials, books of selections appropriate to each grade and similar in content to the mimeographed paragraphs were used. The class in each case was told that they were to have some training in reading silently and in answering questions orally on what they read. They were told to read as fast as they could but only as fast as they could comprehend. The teacher chose a short selection which she thought three or four would finish in three minutes; or, if this were not possible, a selection was chosen which could be divided into approximately two three-minute periods. It was explained to the pupils that at the end of each minute they were to encircle the word that they were then reading, when the teacher said "Mark!" and go right on reading. If they reached the point indicated by the teacher as the end of the selection before she said "Stop!" they should stop reading and close their books. An oral recitation period was then conducted for approximately two minutes on the material just read.

This recitation period was conducted at different times in all of

several ways as follows:—(1) Specific questions about the story were asked, modeled after those of the Thorndike-McCall Reading Scale; (2) several children were called on to tell different parts of the story in order; (3) a series of statements were made and the pupils were asked to tell whether they were true or false; and (4) the completion method was used; that is, a statement was begun and the pupils were asked to complete it according to the story. Any of these methods was combined with any other method or only one used for a practice period. Errors in the pupils' statements were, of course, corrected. The latter part of the selection was especially stressed in the recitation period, so that those who had not finished the reading would be able to understand the material when they started reading again. At the end of the two-minute period the class repeated the above procedure, so that the total time for each day's training, 10 minutes, would be divided into approximately six minutes of reading and four minutes of recitation.

The pupils kept records on which were marked the date and the average number of lines read per minute each day. They were told by the teacher that she was keeping a record of their recitation answers. They were encouraged to do better each day both in comprehension and speed.

This type of training will be called the Oral-Recitation, or the O.R. method. The scores were the number of lines read per minute; each day's scores being the average of six minutes' actual reading. No measures of relative degrees of comprehension were secured, but the teachers sought to keep comprehension at least as good as it was at the beginning.

The main differences between the two methods are: (1) the "paragraph-question groups" used shorter selections with more frequent and more objectively measured tests of comprehension; (2) the "paragraph-question groups" wrote their answers and later studied the corrections, whereas the other groups gave only oral responses; and (3) the paragraph groups could re-read the whole passage to find the answer to a question whereas the Oral-Recitation groups did not re-read after the beginning of the question period. The methods of scoring resulted in a measure of speed for both and a measure of comprehension for the P.Q. groups.

When approximately half of the members of a class had completed their books of paragraphs, the work for all the classes of that grade was stopped and the transfer tests, given at the beginning, were repeated.

Tests for Measuring the Transfer of Improvement

To measure the amount of transfer, the following tests were given:—

1. Thorndike-McCall Scale for Ability to Understand Paragraphs, Form 8. This scale consists of paragraphs followed by questions, and is similar to our "paragraph" material except that the materials range from easy to difficult passages. It measures the degree of difficulty in material that may be comprehended. Basal score is the number of questions correctly answered.

2. Monroe's Standardized Silent Reading Test, Revised, consists also of passages in order of difficulty with briefer demonstrations of comprehension. The author gives one method of scoring to yield a measure of comprehension; another, in which errors in comprehension are disregarded, to measure rate. Both were used.

3. Courtis Silent Reading Test, Form 3, Understanding of Paragraphs, is similar in form to our paragraphs and questions, except that the material is very simple. Score is number of "yes—no" questions answered correctly in five minutes.

4. Courtis Silent Reading Test, Rate, consists of a passage of words to be read continuously for three minutes. This exercise was similar to the work of our "oral-recitation" groups. Score is number of words read per minute.

5. Word-Perception Test, a test devised two years ago by one of the authors as one of a series to measure speed and accuracy of perception of words. It consists of 24 blocks of words, of which the easiest and hardest follow:

hat	sat	pot	rat	bat	hat
magnificent	mountainous	everlasting	magnifersant	appointment	
	distinction	magnificent	merchandise	maggnifsunt	
	magnifficant	illustrious	measurement	composition	

The task is to select and underline the word in the group which is the same as the word in the margin. This test was constructed to measure the speed and accuracy of the mechanical operations of word perception. Score is number of exercises done correctly minus the number of errors.

6. Cancellation of Unlike Groups of Digits. This test consists of rows of pairs of numbers, mainly 5 digits each. The task is to cancel each number which is not identical with the number with which it was

paired. Score is number of groups attempted minus three times the number of errors.

7. Picture-Naming Test—a page containing clear outline drawings of 70 familiar objects, such as hat, watch, kite. The task was to write the names of the objects under the pictures as rapidly as possible. Score is number correct.

Tests 5, 6 and 7 were introduced as experimental safe-guards and utilized in a study of the "control group" technique as will be explained later.

Statistical Treatment to Secure Comparable Measures of Improvement

For our main problem—the determination of the relative amounts of improvement in the function practiced and transferred to other functions—it is necessary to secure measures of improvement which are comparable. We cannot compare gains in the gross scores of the several tests themselves since the units may have very different meanings; gains expressed as percentages of the initial score are also seldom comparable, since the gross size of the mean initial score gives an incomplete statement of the facts at that time and greatly influence the size of the percentages. For example, in one test the initial score (hypothetical cases) is 8, the final score 16, the gain 8; in another the initial score is 50, the final score 66. In gross scores, the gain for the second test is twice that of the first; stating the gain as a percentage of the initial score, the first gives 100, the second 32, or about one-third. A comparison of gains by either method is inadequate.

The most satisfactory measure as yet devised for the purpose of comparing ability or gains in ability is based both upon the averages and some measure of the dispersion of ability in the groups. Of the several measures of dispersion, the standard deviation is most satisfactory and is here used. In detail, the procedure was as follows: (1) computation of the average (mean) performance of each group on each test; (2) computation of the standard deviation (S.D.) of abilities on the initial tests; [1] (3) computation of gains in terms of gross scores by subtracting the average scores on the initial tests from the average scores on the final tests; (4) the conversion of these gains

[1] For the measures of ability in Paragraph-Questions and Oral-Recitation, the S.D.'s were based on the scores for one class (20-25 pupils), each grade being treated separately. The S.D.'s of ability in the transfer tests were based on the score for three classes, combined, at each grade level, since the Paragraph-Questions, the Oral-Recitation, and the Control Groups took these at the same time.

into multiples of the standard deviation on the initial test in question by dividing the average gross gains by the S.D. This yields the S.D. gains which are comparable. The main assumption here made is that these pupils differed from one another equally; i.e. showed the same degree of average variability in the several tests, hence a gain representing a change from the mean to + 1 S.D., a score above which are found in the initial test approximately 16.5 per cent of the children, is the same in one test as in another. This is, of course, the assumption upon which all test scores are objectively "scaled" in the construction of educational and other tests.[1]

The Specific Influence of Practice

The total number of practice periods (10 minutes each) for the P.Q. and the O.R. groups were the same for a given grade, as follows: grade III, 11; grade IV, 17; grade V, 16; and grade VI, 14. Not all of the pupils were present every day, so without regard to date, or intervals between, the practice periods were pushed back to leave no gaps. Under period 3 or 4, then, are included all of the records for the third or fourth practice period, although they were not all done on the same day. The result of this procedure is that all absences appear on the last practice days, some of which are omitted entirely from the computations below.

The specific gains from practice in the P.Q. training are given in Table I, in terms of gross units as well as in multiples of the standard deviations. In all grades the gains are as uniform as those usually found in such experiments and in all classes they are large. Grade 4 shows the largest gross gain, but in proportion to the number of practice periods, grade 3 excels. Grades 4, 5, and 6 improve with approximately equal rapidity. There is no evidence that any of these groups have approximated a limit of improvement. Averaging the results for all grades, we find the mean number of practice periods to be 12.25 and the mean S.D. gains to be 2.45. This figure represents the mean improvement in rate of absolutely accurate comprehension.

The gains in speed of reading, measured by the number of lines read per period, disregarding errors in comprehension, are given in Table II. The curves of improvement for rate thus measured are similar to those for number of questions correctly answered, but the total ascents

[1] Readers who are not familiar with these statistical devices will not, on that account, have difficulty with the following sections. Those who wish a more detailed statement of the procedure may consult the texts of Kelly, McCall, Rugg or Thorndike.

TABLE I

PARAGRAPH–QUESTION GROUPS

Showing the mean number of questions answered correctly and gains in terms of multiples of the standard deviation for the groups trained in paragraph reading.

Practice Periods	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Grade 3																
Mean Score	10.1	11.7	11.2	13.6	16.0	14.9	17.7	19.8								
S. D. Gains over day 1		0.4	0.3	0.9	1.5	1.2	1.9	2.4								
Grade 4																
Mean	11.5	11.9	13.3	13.8	13.9	15.8	14.5	18.2	19.3	17.8	18.8	20.1	17.9	20.8	24.6	25.0
S. D. Gains		0.1	0.4	0.6	0.6	1.1	0.8	1.7	2.0	1.6	1.8	2.2	1.6	2.3	3.3	3.4
Grade 5																
Mean	15.0	17.5	15.9	18.4	19.1	20.0	20.0	19.1	20.4	21.1	21.9	22.0	23.2			
S. D. Gains		0.6	0.2	0.8	0.9	1.2	1.2	0.9	1.25	1.4	1.6	1.6	1.9			
Grade 6																
Mean	16.5	17.4	20.7	24.7	22.7	22.4	23.1	23.3	25.2	25.1	26.4	27.2				
S. D. Gains		0.2	0.8	1.5	1.2	1.1	1.3	1.3	1.7	1.65	1.9	2.1				

TABLE II

PARAGRAPH–QUESTION GROUPS

The mean scores (number of lines read) and gains in terms of the S. D.'s on the initial tests.

Practice Periods	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Grade 3																
Mean Score	40.1	39.3	41.0	40.9	52.2	62.5	60.1	65.3								
S. D. Gains		.08	.09	.08	1.2	2.2	2.0	2.5								
Grade 4																
Mean Score	25.2	26.6	32.1	36.5	42.3	45.1	49.7	51.3	53.0	51.5	48.6	52.2	54.5	56.7	58.2	60.9
S. D. Gains		0.1	0.6	1.1	1.6	1.9	2.3	2.5	2.7	2.5	2.2	2.6	2.8	3.0	3.1	3.4
Grade 5																
Mean Score	38.1	40.3	43.0	45.2	44.1	48.3	54.5	58.5	63.8	68.0	74.6	74.2	77.3			
S. D. Gains		0.2	0.4	0.7	0.6	1.0	1.5	1.9	2.4	2.8	3.4	3.4	3.7			
Grade 6																
Mean Score	45.0	47.1	49.0	53.1	59.3	56.0	64.8	70.5	74.2	74.0	79.4	85.5				
S. D. Gains		0.2	0.4	0.7	1.3	1.0	1.8	2.3	2.7	2.7	3.1	3.7				

TABLE III

PARAGRAPH–QUESTION GROUPS

The number of questions, out of 25 attempted, which were correctly answered.

	Mean of 2 Periods Beginning of Exp.	*Mean of 2 Periods End of Exp.*	*Gain*
Grade 3	16.5	16.5	0
Grade 4	22.8	23.5	0.7
Grade 5	21.3	22.5	1.2
Grade 6	20.6	21.8	1.2

are greater. There is an indication, not very pronounced, that the more advanced grades make, in equal time, a more rapid gain in rate. Combining the four classes whose average number of practice periods is 12.25 as before, the average S.D. gain is found to be 3.32, a figure somewhat greater than that for mean gain in number of questions correctly answered.

The fact that speed increased more rapidly than number of questions correctly answered is not in itself evidence that the former improved somewhat at the expense of the latter. The thoroughness of comprehension during the practice periods is indicated by the ratios of questions answered correctly to those attempted. We have not computed these figures for every period, but for the two initial periods, which are combined, and two final periods likewise combined, for each class. The raw scores represent the number of correct answers in twenty-five attempted answers. They are shown in Table III.

Comprehension becomes no more inaccurate; indeed, in all grades except grade 3, where it remains constant, it becomes somewhat more accurate during the practice which produced great advances in the rate.

Viewing the results of the three types of scores together, especially those for grade 4, 5, and 6, it is apparent that slightly differing emphases were given to rate and accuracy in comprehension. Grade 4, which made relatively small progress in speed, made the greatest progress in number of questions correctly answered. In Table III, it will be observed that this grade, first and last, was most nearly perfect in accuracy. Grade 6, relatively inaccurate at the beginning and end, although it improved in this respect, made the most rapid progress in uncorrected speed. Thus improvement depends, in a subtle way, on the direction in which practice is guided. These differences occurred,

TABLE IV

ORAL-RECITATION GROUPS

The mean scores (lines read per minute) and gains in terms of multiples of the standard deviations for groups trained in reading with oral recitations.*

PRACTICE PERIODS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Grade 4															
Mean Scores	24.9	28.9	32.2	33.6	33.4	35.5	38.9	33.2	41.0	40.3	39.0	41.2	42.1	44.3	45.1
S. D. Gains		0.5	0.9	1.1	1.1	1.3	1.8	1.0	2.0	1.9	1.8	2.0	2.1	2.4	2.5
Grade 5															
Mean Score	29.1	29.9	31.2	34.1	38.4	40.5	41.4	42.8	46.9	48.7	50.0	50.0	53.4	56.2	59.9
S. D. Gains		0.1	0.2	0.6	1.1	1.3	1.4	1.6	2.1	2.3	2.5	2.5	2.9	3.2	3.7
Grade 6															
Mean Score	37.5	40.0	41.8	48.6	55.7	54.4	61.0	61.2	75.7	98.1	103.0	106.4			
S. D. Gains		0.3	0.5	1.2	2.1	1.9	2.5	2.6	4.3	6.8	7.4	7.7			

* Results for Grade 3, because of certain deficiencies in the records, are not presented.

TABLE V

COMPARABLE RESULTS, GRADES 4, 5 AND 6, S. D. GAINS

	PARAGRAPH-QUESTION METHOD		*No. Lines Read*	*Practice Periods*	ORAL-RECITATION METHOD	
	No. Q's Ans. Cor.	*Practice Periods*			*No. Lines Read*	*Practice Periods*
Grade 4	3.4	16	3.4	16	2.5	15
Grade 5	1.9	13	3.7	13	3.2	14
Grade 6	2.1	12	3.7	12	7.7	12
Mean	2.47	13.7	3.6	13.7	4.47	13.7

small though they are, in spite of our efforts to standardize all conditions.

The returns from specific practice by the Oral-Recitation method are given in Table IV. The results for grade 3 were omitted because of certain deficiencies in the records, which do not, however, indicate any deficiencies in the practice itself. The raw scores in this training portray speed. The gains are fairly uniform and large for each class; and more pronouncedly than the gains in speed by the P.Q. groups, the higher the grade the greater the gain. Thus for period 12, the S.D. gains are, for grade 4, 2.0; for grade 5, 2.5; and for grade 6, 7.7. There are reasons for believing that the results for grade 6, which are startling in magnitude, are as reliable as the others. This relation between improvement and grades was also found by O'Brien.[1]

To make the results of the two types of training as comparable as possible, the average gains are computed from such days, for each grade, as will make the number of practice periods approximately equal for both types. The average number of practice periods for the P.Q. groups was 12.25. Taking the 13th day for grade 4, the 12th for grade 5, and the 12th for grade 6, the average number of practice periods for the O.R. groups becomes 12.33. For the P.Q. groups, the average S.D. gain in number of questions correctly answered was 2.45; for rate of reading, errors in comprehension disregarded, 3.32; for the O.R. group the gain in rate of reading, errors in comprehension unmeasured, is 4.23. If we base the comparisons upon grades 4, 5, and 6 only (since results for grade 3, O.R. are unusable) the results appear in Table V. This is a fairer comparison but the results are relatively about the same. The most likely explanation, we believe, is that speed

[1] J. A. O'Brien, *Silent Reading:* New York: Macmillan 1921, pp. 190 ff.

TABLE

Mean scores on initial and final tests, with gains in gross

		GRADE 3					GRADE 4				
		Final Score	*Initial Score*	*Gross Gain*	*S. D. Dist.*	*S. D. Gain*	*Final Score*	*Initial Score*	*Gross Gain*	*S. D. Dist.*	*S. D. Gain*
Thorndike-McCall—Number											
Par. Quest.	Group	43.0	38.9	4.1	5.6	0.73	51.9	48.7	3.2	6.0	0.53
Oral-R.	Group	43.2	41.5	1.7	5.6	0.30	51.4	47.8	3.6	6.0	0.60
Control	Group	37.0	35.8	1.2	5.6	0.21	51.3	50.3	1.0	6.0	0.17
Monroe Comprehension—Number											
Par. Quest.	Group	10.2	7.3	2.9	3.1	0.97	11.4	9.4	2.0	3.2	0.61
Oral-R.	Group	12.1	9.7	2.4	3.1	0.77	13.7	12.7	1.0	3.2	0.31
Control	Group	8.6	8.1	0.5	3.1	0.16	11.9	11.0	.9	3.2	0.28
Monroe Rate—											
Par. Quest.	Group	140.5	110.8	29.7	36.6	0.81	150.6	131.5	19.1	33.7	0.57
Oral-R.	Group	162.4	135.9	26.5	36.6	0.72	170.0	156.3	13.7	33.7	0.41
Control	Group	132.7	118.5	14.2	36.6	0.39	169.4	158.1	11.3	33.7	0.33
Courtis Comprehension—Number											
Par. Quest.	Group	44.1	36.6	7.5	9.5	0.79	45.6	38.9	6.7	10.0	0.67
Oral-R.	Group	42.5	35.2	7.3	9.5	0.77	53.6	44.4	9.2	10.0	0.92
Control	Group	34.7	30.7	4.0	9.5	0.42	44.2	42.2	2.0	10.0	0.20
Courtis Rate—Number of											
Par. Quest.	Group	222.9	192.4	30.5	88.0	0.35	216.5	172.5	44.0	84.0	0.52
Oral-R.	Group	274.1	195.3	78.8	88.0	0.89	336.5	239.4	97.1	84.0	1.15
Control	Group	190.6	152.7	37.9	88.0	0.43	236.3	196.8	39.5	84.0	0.47
Word Perception—											
Par. Quest.	Group	24.2	21.5	2.7	4.4	0.59	26.0	23.4	2.6	4.0	0.65
Oral-R.	Group	23.3	21.0	2.3	4.4	0.51	26.8	24.7	2.1	4.0	0.53
Control	Group	22.5	20.4	2.1	4.4	0.49	26.2	24.6	1.6	4.0	0.40
Picture-Name Writing—											
Par. Quest.	Group	32.9	28.0	3.9	6.5	0.60	36.6	31.6	5.0	7.2	0.69
Oral-R.	Group	31.8	29.6	2.2	6.5	0.33	41.2	35.8	5.4	7.2	0.75
Control	Group	27.7	25.7	2.0	6.5	0.31	37.6	33.6	4.0	7.2	0.56
Cancelling Groups of Unlike Digits—											
Par. Quest.	Group	4.42	3.37	1.05	4.2	0.25	5.11	4.00	1.11	3.3	0.34
Oral-R.	Group	5.41	3.65	1.76	4.2	0.42	6.61	5.44	1.17	3.3	0.35
Control	Group	4.00	2.37	1.63	4.2	0.39	5.86	4.86	1.00	3.3	0.30

VI

scores and in multiples of S. D.'s of initial ability.

GRADE 5					GRADE 6				
Final Score	*Initial Score*	*Gross Gain*	*S. D. Dist.*	*S. D. Gain*	*Final Score*	*Initial Score*	*Gross Gain*	*S. D. Dist.*	*S. D. Gain*
of Questions Correctly Answered.									
58.0	53.7	5.3	6.5	0.82	62.5	58.6	3.9	4.9	0.79
62.4	58.3	4.1	6.5	0.63	65.3	62.1	3.2	4.9	0.65
59.4	57.4	2.0	6.5	0.31	61.9	59.9	2.0	4.9	0.40
of Questions Correctly Answered.									
14.0	12.1	1.9	3.3	0.58	16.7	13.7	3.0	3.5	0.86
13.6	13.0	0.6	3.3	0.18	19.0	15.6	3.4	3.5	0.97
12.7	12.1	0.6	3.3	0.18	16.3	14.2	2.1	3.5	0.60
Number of Lines Read.									
170.1	157.4	12.7	36.0	0.35	205.2	168.6	36.6	37.0	0.99
175.1	169.0	6.1	36.0	0.17	231.3	200.5	30.8	37.0	0.83
173.1	164.6	8.5	36.0	0.23	202.1	170.0	32.1	37.0	0.86
of Questions Correctly Answered.									
57.1	52.9	4.2	9.9	0.42	58.8	53.2	5.6	9.3	0.60
51.3	48.0	3.3	9.9	0.33	62.1	58.0	4.1	9.3	0.44
52.1	49.9	2.2	9.9	0.22	57.1	54.0	3.1	9.3	0.30
Words Read Per Minute.									
289.4	221.5	67.9	80.0	0.85	374.0	272.2	101.8	80.0	1.27
393.1	237.5	155.6	80.0	1.94	532.1	309.4	222.7	80.0	2.78
284.3	245.2	39.1	80.0	0.49	349.1	284.1	65.0	80.0	0.81
Number Correct.									
29.4	27.2	2.2	4.6	0.48	27.1	25.8	1.3	4.0	0.33
30.3	26.9	3.4	4.6	0.74	30.9	28.5	2.4	4.0	0.60
28.7	27.9	0.8	4.6	0.18	27.3	26.4	0.9	4.0	0.23
Number Names Correct.									
41.7	39.0	2.7	8.6	0.31	54.2	50.1	4.1	8.6	0.47
48.2	45.8	2.4	8.6	0.28	55.3	51.5	3.8	8.6	0.44
42.3	39.7	2.6	8.6	0.30	50.8	47.3	3.5	8.6	0.41
Number Attempts Minus 3X Errors.									
6.15	4.77	1.38	3.5	0.39	7.08	5.87	1.21	3.5	0.35
6.44	5.16	1.28	3.5	0.36	8.65	7.73	.92	3.5	0.27
5.56	4.81	0.75	3.5	0.21	6.57	5.43	1.14	3.5	0.32

was given rather more, and accuracy in comprehension rather less, emphasis in the Oral-Recitation groups.

The Transfer of Improvement

In the trained functions themselves, the improvement, stated in terms of comparable measures, multiples of the S.D.'s from the averages of the initial performances, differs with the methods used to measure raw gains, amount read, number of questions correctly answered or proportion of questions answered of those attempted. Gains in the transfer tests, those given before and after training, will likewise vary and as a consequence, the measurement of amount or per cent of transfer offers difficulties.

For a first presentation, the various transfer tests have been scored in what seems to us, or to the authors of the tests, as the most reasonable manner to secure a measure of general ability. Since all groups took the transfer tests, the S.D.'s are based in each case upon the three classes of a particular grade combined. The mean gains for each class in raw scores are then computed; initial score subtracted from final, and the remainder divided by the S.D. to secure the S.D. gains.

In Table VI, the mean scores, the difference between them and the S.D. gains are given for all groups arranged under grades. Table VII gives the average S.D. gains for all grades before and after subtracting the gains for the control groups. The gains made by the control groups are due to improvement during the transfer tests themselves, plus that due to growth and the regular school instruction during the intervals between the initial and final tests. By subtracting these amounts, the improvement due to the paragraph-question or oral-recitation training is revealed.

The training on paragraphs gave the greatest transfer to Thorndike-McCall and Monroe comprehension (0.45 S.D. in each case). Both of these tests were similar in form to the materials used in training. The specific gain on the training material for these groups, however, was 2.45 S.D. or 5.45 times the improvement on Thorndike-McCall and Monroe comprehension. These tests consist of passages constantly increasing in difficulty, and purport to measure the degree of depth or difficulty, as distinguished from rate of comprehension. The conclusion suggested is that the training marked by increased speed and efficiency in reading certain kinds of material of a moderate and uniform degree of difficulty increased but slightly the depth or power of comprehension.

TABLE VII

SUMMARY OF TABLE VI

S. D. Gains for all grades combined, together with the P. E. of the means.*

		AVERAGE S. D. GAINS			AVERAGE S. D. GAINS MINUS CONTROL GROUP GAINS		*P. Q. Gains Surpass O. R. Gains by*
		Par. Q.	*Oral-R.*	*Control*	*Par. Q.*	*Oral-R.*	
Thorndike-McCall	Mean	0.72	0.55	0.27	0.45	0.28	0.17
	P. E.	.035	.047	.030	.047	.054	.073
Monroe Comp.	Mean	0.76	0.56	0.31	0.45	0.25	0.20
	P. E.	.054	.082	.072	.078	.109	.133
Monroe Rate	Mean	0.68	0.53	0.45	0.15	0.08	0.07
	P. E.	.061	.087	.081	.10	.12	.15
Courtis Comp.	Mean	0.62	0.62	0.29	0.33	0.33	.00
	P. E.	.041	.080	.026	.05	.08	.10
Courtis Rate	Mean	0.75	1.69	0.55	0.20	1.14	0.94
	P. E.	.110	.240	.047	.13	.25	.24
Word Percept.	Mean	0.51	0.60	0.33	0.18	0.27	0.09
	P. E.	.040	.029	.041	.056	.05	.07
Pict. N. Writing	Mean	0.52	0.45	0.40	0.12	0.05	0.07
	P. E.	.047	.061	.034	.059	.068	.09
Cancell.	Mean	0.33	0.35	0.30	0.03	0.05	0.02
	P. E.	.016	.017	.021	.027	.028	.039

* The computation of the measures of reliability of the averages and differences between averages occasioned some difficulty. The means in the above table are averages of averages. A P.E. might be obtained by averaging the S.D. of each of the four groups around its own average and divide it by $.67\sqrt{-4}$. This P.E. would be much smaller than the ones shown in the table which were computed as follows: (1) compute average of the four averages for each test given in Table V; (2) get S.D. of these from the average (3), divide by $.67\sqrt{-4}$. Since the several grades practiced for different lengths of time, the variation from the common average is much higher than would be produced by the influence of chance errors alone. All P.E.'s are therefore too large. The effect will be to hold us to a conservative account of differences (—) which is not without merit.

Next to these two tests, the greatest transfer from the P. Q. training was made to the Courtis Comprehension test, which is similar in form to the training material and of material uniform in difficulty. The material was, for our pupils, too easy; indeed, so trivial as to invite disinterest. Conceivably, habits of reading to get more important and complex facts from more significant material are quite different from those involved in reading childish material to answer trivial questions. The transfer is positive (0.33 S.D.) but less than one-seventh of the amount of gain in the practice material.

Although the P. Q. group increased markedly in rate of reading for purpose of securing the answer to pertinent questions—the gain was 3.6 S.D. for number of lines read, comprehension disregarded—the transfer to two "rate" tests, the Courtis and Monroe, is small, 0.20

S.D. and 0.15 S.D. respectively. For the former, the transfer is but 5.6 per cent. In our opinion, it is very doubtful whether the Monroe Rate score represents rate or anything else of importance; we, therefore, attach little importance to that result. But in the slender spread of improvement from the training to speed on the Courtis test is an interesting suggestion that speeds in reading are diverse; children learn to read rapidly for one purpose without acquiring even approximately equal facility for other purposes. The constituents of reading are perhaps, more numerous and specific than we had surmised.

From the Oral-Recitation Groups, the transfer is distributed among the tests in strikingly different proportions. Whereas the P. Q. groups gained but slightly (0.20 S.D.) in Courtis rate, the O.R. groups gained markedly, 1.14 S.D. Of all the several amounts of transfer, the latter is the largest. Contrasted with specific gain in training that seemed so similar, the transferred improvement is less imposing. For grades 4, 5, 6, the only ones for which we have usable O.P. records, the specific gains average 4.6 S.D.; the average transfer for the same grades is 1.40 S.D.[1] or 30.4 per cent. Between two interpretations, one, that the pupils were, because of the ease of the Courtis material, not stimulated to do their best; the other, that rapid reading in moderately difficult material is quite a different activity from rapid reading of very simple material, we cannot on present evidence decide. Perhaps both explanations are true in some proportion.

The transfer from O.R. to the comprehension tests, Courtis, Thorndike and Monroe, is meagre, measuring 0.33, 0.28 and 0.25 respectively. Comparing results for the comparable grades (4, 5 and 6) the average transfer to these three tests is about 6.1 per cent.

The O.R. training increased ability in the Monroe score for rate by only 0.08 S.D.; the lack of significance of the rate score in this test was mentioned above.

The different methods of measuring gain in the P.Q. training, and the omission of the scores for grade 3 in the O.R. training, make general comparisons of the magnitudes of transfer, as shown in Tables V and VI somewhat difficult. Table VIII has been constructed to display the facts more intelligibly.

What now appears to be the answer to the question: To what degree does training one reading reaction increase ability in others? It is necessary, as disclosed in the data above, to give the answer in terms

[1] This figure is not the same as that given in Table V; it is the mean of the S.D.'s on the *last* practice days, as given in Table IV.

TABLE VIII

RESULTS ARRANGED TO YIELD THE FAIREST COMPARISONS OF RELATIVE GAINS.

Results of specific training shown at top of each column with transfer values below.

P. Q. scored by no. Q's correctly answered, average all grades = 2.45 S. D.	P. Q., scored no. lines read, comp. disregarded, all grades = 3.33 S. D.	O. R., scored by no. lines read, comp. disregarded, grades 4, 5, 6 = 4.63
Thorndike - McCall, scored as above, gain = 0.45 S. D. or 18.4 per cent of specific improvement.		Thorndike-McCall, scored by no. Q's correct, results for same grades as above, gain = 0.34 or 7.30 per cent.
Monroe Comp., scored as above, gain = 0.45 S. D. or 18.4 per cent.		Monroe Comp., scored by no. Q's correct, results for grade above, gain = 0.14 S. D. or 5.2 per cent.
	Monroe Rate, scored as above, gain = 0.15 S. D. or 4.5 per cent.	Monroe Rate, scored as above, same grades as above, gain = 0.00 S. D. or 0 per cent.
Courtis Comp., scored as above, gain = 0.33 S. D. or 13.4 per cent.		Courtis Comp., scored by no. Q's correct, same grades as above, gain = 0.32 S. D. or 7 per cent.
	Courtis Rate, scored as above, gain = 0.20 or 6.0 per cent.	Courtis Rate, scored as above, same grades as above, gain = 1.03 S. D. or 22.2 per cent.
Average gain, comp. measures = 16.7 per cent.	Average gain, rate tests = 5.25 per cent.	Gain, rate tests, Courtis only = 22 per cent. Average gain, comp. tests = 5.2 per cent.

of the particular reading reaction trained and the particular type of untrained reading one has in mind. The degree of transfer varies greatly. To answer the question generally (and admittedly crudely) we may consider the averages at the foot of Table VIII. The P.Q. training increases comprehension in other materials, when the method of scoring is the same in both cases, by 16.7 per cent; it increases rate in other materials, 5.25 per cent. The transfer of O.R. training to rate in the Courtis test is 22 per cent, and to comprehension, 5.2 per cent. In these consolidated results, however, many of the important facts are concealed.

WHAT ABILITIES TRANSFER

The transfer of ability is small but genuine. It was suggested at the beginning of this article, on the basis of theory, and since verified by the experimental data, that reading is not a single unitary ability or power but a composite of many activities. It would, therefore, be inconsistent and improper to speak of the transfer of reading ability unless it is tacitly understood that we mean thereby not different amounts of some unitary power but various minute abilities in various amounts. If we accept, furthermore, Thorndike's theory of transfer, the theory that the training of one function influences another in so far as the two have identical elements, or involve identical abilities, we are driven, in order to make our findings more intelligible, to a search for the common elements or activities which account for the transfer manifest.

With this purpose in mind, during the construction of plans for the experiment three tests designed to measure abilities possibly constituent in one or both of the forms of training, were included among the transfer tests. They were the *word-recognition*, the *picture-name writing* and the *digit-cancellation* tests. The results of these tests (in Tables VI and VII are illuminating.

The word-perception test was designed by one of the writers to measure, in as pure form as possible, sheer speed and accuracy of the perception or recognition of word forms. That it does measure this ability very well has been demonstrated elsewhere and in other ways.[1] Both the paragraph-question and the oral-recitation forms of training result in an increase in this ability over and above that due to ordinary school training (control group); the O. R. more than the P.Q.—0.27 S.D. and 0.18 S.D., respectively. Our interpretation of these facts is that reading in which rate is emphasized and improved results in a sharpening of the skill with which words are mechanically perceived. The oral-recitation method apparently gave more emphasis to, and probably but not certainly resulted in, greater improvement in speed—a result suggested by the measures of transfer in the word-perception test.[2]

The cancellation-of-unlike-digits test, involves neither the perception nor the writing of words. It was selected as a means of measuring

[1] See Gates, A. I. The Psychology of Reading and Spelling with Special Reference to Disability, New York: Teachers College, Bureau of Publications, 1922, and in articles to appear later.

[2] The difference is $0.27 - 0.18 = 0.09 \pm$ P.E. .07. Since this P.E. as computed is doubtless too large, it is fairly probably that the difference is significant.

more or less well the general technique of taking tests, which conceivably might be improved by the P.Q. and the O.R. groups. Just what devices constitute this technique, we do not know and can merely surmise,—possibly such things as getting a quicker start, placing material in a better position, losing no time in curious surveys of the whole test, increasing control of attention or of excitement, and the like. Whatever they may be, these items are acquired in about equal, but slight, amounts by both practice groups. Part of the specific and transferred improvement, then, is not reading as such but improved technique in taking pencil-and-paper tests.

The picture-naming test was introduced to measure the improvement in ability to write a word or two as a response to a stimulus, under test conditions. The stimuli were purposely made easy and familiar—they were clear cut drawings of familiar objects—in order to measure the writing responses, rather than the activities of perception emphasized in the preceding test.

Table VII shows that the paragraph-question groups, which answered the questions by writing a word or two or by underlining a word, excelled the control group by 0.12 S.D., whereas the oral-recitation groups, which did no writing, gained in this ability somewhat less; the gain being 0.05 S.D. greater than that of the control group. In the case of the P.Q. group, at least, part of the specific improvement, and part of the transfer to other tests, may be not reading at all but improvement in writing words in response to stimuli under test conditions.

The gains for the O.R. groups were the same in the cancellation and Picture-Name Writing tests; both are due, presumably, to general technique in taking tests. For the P.Q. the gain in the Picture-Name Writing test is greater than in the cancellation test—0.12 S.D. and 0.03 respectively. The former test gives play not only to writing under test conditions, but also to the other features of technique which produce the smaller gain. The difference[1] (0.09 S.D.) apparently measures roughly the influence of increased skill in writing word responses during tests. Since the O.R. group had no such practice, it reveals no gain in this test beyond that due to general technique.

The transfer of abilities that are intrinsically reading abilities is, then, somewhat less than indicated by the figures in Table VII or VIII. It may be urged, with respect to general efficiency in life, that it makes no difference whether the improved ability in the work of reading-to-get-the-facts is mainly improvement in some intellectual process

[1] The P.E. of this difference is less than 0.06.

TABLE IX

TRANSFER AFTER ALLOWANCES HAVE BEEN MADE FOR IMPROVEMENT IN FACTORS NOT INTRINSICALLY READING ABILITIES.

Specific gain, P. Q. groups, all grades, score, no. correct = 2.33 S. D.	Specific gain, P. Q. groups, all grades, score, no. lines read = 3.21 S. D.	Specific gain, O. R. groups, score, lines read, grades 4, 5, 6 = 4.58 S. D.
Transfer to Thorndike-McCall = 0.33 S. D. or 14 per cent.		Transfer to Thorndike-McCall = 0.29 S. D. or 6.3 per cent.
Transfer to Monroe Comp. = 0.33 S. D. or 14 per cent.		Transfer to Monroe Comp. = 0.09 S. D. or 2 per cent.
Transfer to Courtis Comp. = 0.21 S. D. or 9 per cent.		Transfer to Courtis Comp. = 0.27 S. D. or 6 per cent.
	Transfer to Courtis Rate = 0.17 S. D. or 5.3 per cent.	Transfer to Courtis Rate = 0.98 S. D. or 21.2 per cent.

or activity, in facility of sheer word-perception, in speed of jotting down notes, or in other matters of adjustment to the task—time saved in one way is as good as time saved in another. For the science and practice of education, however, it makes all the difference in the world to know just what we are teaching.

To ascertain more closely the transfer of abilities intrinsic to reading, we may take the data of Table VII and treat them as follows: From the specific gain in P.Q. training, subtract 0.12 S.D., the approximate amount due to acquisition of general efficiency in taking tests and in writing word responses under test conditions; [1] from the specific gains in O. R. subtract 0.05 S.D., the amount due to general test-technique training; from the transfer reading tests taken by the P.Q. groups subtract 0.12 S.D. if answers were made in writing and 0.03 S.D., the transfer of general technique if there were no written responses; from the transfer reading tests for the O.R. group subtract 0.05, the amount of transfer due to factors not intrinsically reading ability. The resulting values are given in Table IX.

The corrected estimates are slightly smaller than those based upon the gross scores. They, or rather the considerations which lead to them, are of value mainly in disclosing the extreme complexity of the

[1] Perhaps the amount subtracted should be larger, since "technique" and "ability to write word responses" will not themselves transfer completely to other tests, but we cannot, from our data, tell what the specific gains in these respects were.

problem of appraising the transfer of training. By specialists in this field of inquiry, it will be freely admitted that much of the experimentation in the past has been crude, although not always misleading. The demands of education, at least, are for results that require methods more refined. This study provides a few suggestions of service to that end.

The ordinary control group technique, it is now apparent, is not wholly adequate for the measurement and analysis of the transfer of improvement. Failure to control the transfer of improvement in mere technique in taking tests which has been quite universal in investigations of the past, has given a fictitious appearance of transfer in general ability to add, do geometry, grammar, etc., where it did not exist or where it existed in smaller quantities, *since it is probable that improvement in ability to take tests generally results in making the total transfer larger than that due to gain in addition, geometry, etc., per se.*

It is suggested, therefore, that in future work the investigator should scrutinize his tests with care, considering them not merely as measures of ability to read, add or whatnot, but as a measure of various abilities, to perceive words or digits, to adjust to a certain kind of task-under-time-pressure, to control attention, to write words or figures in such and such a way, and so forth. Where the interest is in measuring reading or some other abilities specifically, control for all of the other factors must be provided and these extrinsic abilities allowed for.

BEARING OF THE MAIN RESULTS ON EDUCATIONAL PRACTICE

The results of the study point unequivocably, we think, to certain practices in the teaching of reading. First, it is apparent that instruction and practice in reading in a general way—mere reading—does not guarantee the development of all the important types of reading ability; indeed, it almost certainly will not do so. One of the writers, during the past four years, has studied the reading abilities of a number of graduate students at Teachers College who complained of slowness in rate. These cases frequently disclosed more than mere slowness; they showed impressive deficiencies in abilities to read in each of several important ways,—to skim, to pattern variously the rate and type of reading reactions to the kind of material or the purpose of the moment. Training in reading must be many-sided; many types of reactions must be acquired.

Second, while transfer from one type of reading to others is genuine and usually positive, it is so small that it cannot be depended upon to

develop desired abilities. They must be developed specifically. We may accept with gratitude the increments from transfer; but never be willing to accept them as a substitute for direct training.

Third, it is apparent, in the results of this study, that a most economical and interesting way to develop reading abilities consists in utilizing the principles of 'practice experiment' in forms similar to but superior to those used here. Compared to the regular class-room technique, not only were the direct returns for practice in the two experimental groups relatively very great, but the indirect returns, through transfer, were also relatively great. The "control groups," it will be recalled, were not groups receiving no school instruction in reading but groups receiving regular classroom work.

The "practice experiment" procedure embraced five main features: (1) the selection of materials carefully adjusted in difficulty, utility and interest to the group; (2) provision of devices for testing and stimulating the type of comprehension to be trained; (3) a time control to provide a measure of and incentive to increase in efficiency; (4) the keeping of records of typical errors, defects, deficiencies, and progress by the pupils; and (5) adequate administration of practice and reviews.

Of these requirements, the first and last merit special attention, taking them up in reverse order.

The method of training with practice materials often utilized in schools consists in a series of short, intensive daily exercises, after the fashion of the practice experiment. This is desirable, and especially in remedial work intensity of application is a requirement of utmost importance. Having given one intensive continuous series of practices, the tendency has been to let it go at that. A type of reading, like any other acquired ability, dies out with disuse. Reviews, not always necessarily as long as the original practice, and often most economical when given at constantly increasing intervals, are quite as necessary as they are in the mastery of facts in history, multiplication tables or skill in typewriting.[1]

In the selection and mechanical arrangement of materials of proper difficulty, interest and utility, much ingenuity has already been displayed but more is needed.[2] Many of the exercises are patterned

[1] For some of the principles involved, see Gates, A. I. *Psychology for Students of Education*, New York: Macmillan, 1923, pp. 257-262, 286-293.

[2] For example: Jean Betzner. "Materials for Practice in Silent Reading." *Horace Mann Studies in Education*, vol. 1, April, 1923. S. S. Brooks, *Improving Schools by Standardized Tests*. Boston: Houghton Mifflin, 1922, 143-246. *Educational Bulletin*, Minneapolis Public Schools, No. 2, May, 1923. Mary R. Lewis. "How a Teacher Helped Poor Readers to Improve," *Horace Mann Studies in Education*, vol. 1, April,

after the forms of educational and psychological tests, which is desirable except that when the difficulty, interest or utility of the material or the type of reading reaction is overlooked. For example, one may question, mainly on grounds of utility, the value of such exercises as the following for purposes of teaching reading.

Rearrange the following disarranged sentences: [1]

1. The countries circling / "the world" meant / conquered Hannibal / around the Mediterranean Sea / when the Romans / at the time. etc.

Mark out one work out of place in each line: [2]

green	hat	orange	blue	white
boy	girl	man	tell	woman

But in these and other articles and books are contained excellent types of practice materials designed to cultivate not only direct comprehension of facts but also simultaneously abilities to interpret, evaluate, classify, organize, reflect, imagine, appreciate. These are types of hierarchies of habits for the development of which more materials are needed.

1923. *Twentieth Year Book of the National Society Study of Education.* Part II, Section 2, 1921. J. A. Wiley. *Practical Exercises in Supervised Study and Assimilative Reading,* Cedar Falls, Iowa: Iowa State Teachers College, 1922.

[1] Recommended by S. S. Brooks, *op. cit.* pp. 222.

[2] From the Minneapolis Bulletin, *op. cit.*

THE EDUCATIONAL ACTIVITIES OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION IN NEW YORK CITY

By FRANKLIN W. JOHNSON
Associate Professor of Education, Teachers College

An extensive survey of the educational activities of the Young Men's Christian Association in New York City was made last year by the Institute of Educational Research of Teachers College. The two hundred and ten page report, published in August, shows that the Association is undertaking a work of surprisingly wide scope in the education of adult men.

Education came to be recognized as one of the functions of the Association shortly after it was founded in London in 1844. The work took the form of lectures, discussion clubs, reading rooms and similar activities for the benefit of members who had been drawn to the Association primarily because of religious interest. These educational activities were meagre and limited. They were regarded as secular and therefore of doubtful value to the Association. Prior to 1890 there was little encouragement and much opposition from Association leaders to the promotion of any sort of an educational program. Since the beginning of the present century, however, the educational work has expanded rapidly both in range of courses offered and in number of men enrolled.

In 1900 the number of students enrolled in Young Men's Christian Association classes in Canada and the United States was 25,902. In 1904 the enrollment was 33,520, and from this time the number increased in every year but three until 1920 when it was 129,779. In 1904 there were 1,465 students in the educational classes of the Association in New York City; in 1920 there were 10,760. Since 1900 the number of students in Y. M. C. A. classes in Canada and the United States has increased more than 400 per cent; the increase in New York City during the same period has been 773 per cent.

These figures include only the work of the Association in Manhattan and the Bronx to which the survey was confined. The num-

bers would have been considerably increased had they included all the educational activities of the Y. M. C. A. in Greater New York. Of the different branches in Manhattan and the Bronx only five carry on educational work, the Bronx Union, East Side, Harlem, Twenty-third Street, and West Side; and of these the Bronx Union and Harlem branches enroll only a relatively small number of students.

The Association offers night and day instruction covering a wide range of vocational work, including three-year courses in accounting and law. There are also two secondary day schools for boys. The trade courses include architectural drawing, automobile driving and repair, bricklaying, electricity, machine design, motion picture operation, Morse and radio telegraphy, plan reading and estimating, plastering, plumbing, poster design, showcard writing, sign painting, stationary engineering, surveying, textiles, and tile-setting. The fees paid for instruction in 1921 amounted to $498,930, which is approximately 30 per cent of the total income of the Association in New York City.

Education seems to have developed in the Y. M. C. A. on an opportunist basis. Having had its origin in a desire to serve men in need, it has expanded rapidly without the expert leadership necessary to secure unity of effort and to avoid waste. The Survey reveals a lack of definite objective and a failure to apply well-known principles of educational organization and methods of instruction, both in the city as a whole and in the separate branches in which education is carried on. Specific statements of educational aims from the employed secretarial force, including many not directly connected with the educational work and from lay members of the committees on education, show a very wide divergence. These statements include recommendations varying from those who would restrict the educational service to the men already members of the Association to those who would secure the largest possible registration and make the educational departments not only self-supporting but even a source of profit to be applied to the support of other activities. Not only do the branches in which educational work is carried on differ from each other in their methods of organization and promotion, in the emphasis which they place upon their professed objectives, and in the means employed to secure these objectives, but within the separate branches themselves there is lack of agreement and uniformity of practice on the part of those who are engaged in the work of administration or instruction.

This work began in an effort to meet certain needs of men already members and, as such, was thoroughly consistent with the aims of the

Association. It has developed to the point where the majority of the men in educational classes desire and receive few or none of the other services of the Association of which they are members only because of the requirement of membership imposed. Not only is the Y. M. C. A. in many of its courses in direct competition with other educational institutions, either public or private, but to a degree the different branches are in competition with each other. The scope of the work has developed until it covers the range from the upper elementary school through the professional school. In New York City the work of the educational departments in several branches already seriously encroaches upon the facilities originally intended for other forms of service, to the detriment of activities formerly, at least, regarded as important. The Association is thus faced with the imperative need of a consideration of the relative importance of its several aims and of so adjusting its material equipment and its organization as to secure the objectives which it sets up.

It is, first of all, necessary to consider whether the Association has sufficient justification for engaging in education at all, and, if so, to what extent and under what conditions. There are some whose opinions in the field of education are worthy of weight who hold that it is contrary to good public policy for the Y. M. C. A. to engage in any of the forms of education provided by the state. These hold that the same reasons that justify education at public expense during the period of compulsory education apply equally well to the continuation school and schools for adult education. The state is increasingly coming to recognize the obligation for such education. Sound educational theory, in their judgment, is opposed to the entrance of private institutions into a field which is primarily within the function of the state. This opposition, in the minds of some, has particular weight in connection with the Y. M. C. A. because of the socially divisive competition which is likely to result from the duplication of the Association's educational program, already under way, by other similar institutions, who have an equal right with the Y. M. C. A. to enter the field.

While recognizing the theoretical validity of this position and seeing the possible dangers involved in departing from it, the survey staff recommended the continuance of educational activities by the Y. M. C. A. This recommendation was based upon the fact that the state does not now provide, and is not likely soon to provide, adequate facilities to meet educational needs. It is of course understood that

this failure on the part of the state does not constitute an obligation of the Association. It presents an opportunity.

There are several possible grounds upon which the Y. M. C. A. may claim justification for a program of education:

1. It may, by special emphasis upon certain aims, secure desirable results to a degree not attained by other educational agencies.

2. It may, through contacts naturally made in other Association activities, furnish incentives for needed education to men who would not otherwise be reached through the existing agencies.

3. It may offer courses in fields in which opportunities for training are not provided by any public agency.

4. It may duplicate the work of other agencies in fields in which the needs are not adequately met.

5. It may utilize space in its buildings, not otherwise needed or not used at all times, in such a way as to effect economy in the capital expenditure for education in the city.

These claims are by no means equal in importance, nor can they be accepted without qualification. They will, however, prove serviceable in an attempt to determine the kind and quality of education which the Y. M. C. A. is justified in undertaking to give. These five claims will be considered in order.

1. One of the aims which is stressed most by the Association in its educational program is character building. One might judge, from a reading of the literature put forth, that justification of the educational program was thought to rest mainly upon the attainment of this aim. If this could be shown to be a distinctive outcome it would go far toward furnishing such a justification. It should be observed, however, that this objective is also set up in public education and that the effort is there being made to devise and put into operation methods to secure it. It is altogether in harmony with the spirit and purpose of the Association to emphasize character building, but no clear analysis of this aim nor any adequate statement of the method to be employed by officers and teachers in securing it were found.

2. The possibility of furnishing incentive and direction to men who could not so easily be reached by other agencies is one of the strongest justifications for the educational program of the Association. Many of the members have not had a chance or need a second chance. It is in accord with the expressed purpose of the Association to furnish the incentive and guidance which these men need. In its inception this was the aim of the educational service. The original

policy seems to have shifted to that of securing, through wide publicity and promotion, as large a number of registrants as possible, without sufficient provision for meeting their individual needs. There is, of course, a real desire to serve each man, but the numbers have so far outrun the ability of the Association to meet its obligation in this regard that there remains, on the whole, only the aspiration, not the achievement.

3. In contrast with the more formal organization of the curriculum in public educational institutions, the Y. M. C. A. is able to make more immediate response to new educational needs. Its direct contact with men engaged in a wide range of activities enables the Y. M. C. A. more promptly to sense needs in new and untried fields. Its freedom from the restraining traditions of longer established schools makes the Association more readily responsive to such needs. The readiness of the Y. M. C. A. to undertake, however crudely, educational work which is distinctly of the pioneering type is a valuable asset to the city. There is, of course, the obligation of securing the best possible teaching and material of instruction and of applying expert supervision in order to improve as rapidly as possible the effectiveness of the work. Such opportunities for pioneering, in all probability, will be constantly arising and will continue to furnish a legitimate field for educational endeavor. It does not follow, however, that the work thus begun should continue permanently. The work should be undertaken for the purpose of revealing a need, of showing that it is feasible to give a type of education that meets that need, and of educating the public to the point where the work will be taken over and carried on by public agencies.

4. With the rapid increase in population and the broadening scope of educational demands, neither the public schools nor all the available agencies combined are equal to the needs of New York City. An educational directory gives the names of several hundred private schools engaged in the widest range of work. Many of these, of course, are of an inferior sort, the continuation of which is to be deplored; an enlargement of their number is to be discouraged. It may be said, however, with confidence, that adequate provision is not made for proper education in this city, nor is such provision likely to be made in the immediate future. The Y. M. C. A. thus finds justification for duplication of the work of other agencies in which the needs are not fully met, but only provided that its educational work is conducted on the highest level of efficiency. The prestige of the Association and

its emphasis upon social service as one of its cardinal aims would justify its work on no other basis. Careful consideration should be given to the relative needs for different types of education, in order to avoid waste through competition in fields in which adequate provision is otherwise made.

The Y. M. C. A. would seem to be peculiarly adapted to the work of Americanization among men of foreign birth. There is abundant need of this in all cities and especially in New York. At the branches at which educational work is carried on there is, compared with the need, only a negligible amount of instruction in English for foreign-born men.

5. A more efficient use of available space by itself does not justify the Association in including education among its activities. Housing is only one element of cost. There is space at some of the branches which is now being used for educational work which would otherwise be used only a part of the time or not at all. Much of this, however, does not meet reasonable educational and hygienic standards. In other cases the educational work occupies space formerly devoted to other essential activities. This can be justified only if the total service thus rendered is more valuable. In its future building program the Association should consider carefully the immediate and probable future needs of its various activities, with particular attention to the relative importance of these activities. With reference to the possible consideration of the policy of erecting buildings for educational purposes only, the aim should be rather to improve the educational service already offered than to enlarge the work to such an extent that new buildings devoted solely to educational work would become necessary. Proximity to other activities of the Association would seem to be essential to the attainment of the aims which it regards as important. It was not intended, however, to discourage the substitution of new and more serviceable buildings for those which have become unsatisfactory and inadequate.

Among the conclusions and recommendations the following are the most important:

I. *General Policy.*

The survey takes the position that the Y. M. C. A. is justified, on the ground of present public need and consistently with its own aims, in offering a program of education for men of the ages included in its membership. The position is emphatically taken that the Association

is obligated to organize its program in such a way as to secure the maximum return for the funds which it expends, and to secure in every form of instruction which it offers the highest possible benefits to the men whom it enrolls in its classes.

II. *Forms of Educational Service.*

No definite answer is given to the question as to what particular forms of education the Association should undertake. There seems to be no settled policy of the Association in this regard, either in New York or in other cities. The opportunist basis on which the program has developed would appear to exclude no type of work, academic, trade, or professional, from the possible educational offerings. However, from the point of view of community needs and of the probable success in providing suitable equipment and instruction, there is a wide difference between a law school enrolling several hundred students or a secondary day school of 150 boys and some of the trade and vocational courses now offered. The general principle is laid down that the educational activities should be selected and conducted so as to contribute definitely to the realization of the chief objectives of the Association. It is not the function of the survey to formulate these objectives; this is a task for the Association itself. However pressing the need of education for adult men may be, the fundamental purposes of the Association include much that is outside of education. The worth of an educational effort should be gauged by the extent and quality of its contribution to these aims, not by the numbers attracted nor by the money involved.

The welfare of the movement as a whole should be a constant consideration, but the welfare of the community which the Association is organized to serve is even more important. In reaching a decision regarding the desirability of carrying on educational work it is necessary to realize that when a practice is approved for the Y. M. C. A. it must also be approved for any similar organization desiring to undertake educational work, since the Y. M. C. A. can claim no special privilege in this regard. It will, therefore, always be pertinent to ask what would be the effect upon public education and upon the community if the proposed practice should be generally adopted by similar associations, including clubs and institutional churches.

The Y. M. C. A. should carefully consider to what types of education it should restrict its activities in order to render the best service to men in New York City. It is clearly undesirable to enter into

competition in fields in which adequate provision already exists. The educational activities in some branches already seriously interfere with other important activities. There is the obvious danger that education will become the chief activity of the Association and that other activities which have been successfully maintained will assume less importance. It would be a hazardous experiment to throw over or greatly to diminish any of the activities which are appropriate to the fundamental aims of the Association and in which it has met with marked success, in order to undertake a more extensive program in a field in which other agencies are likely to make increasingly more adequate provision and for which the Y. M. C. A. is not prepared by its experience and equipment to render a unique service. It is the part of wisdom to consolidate the lines before attempting further advance.

III. *Administration and Supervision.*

The survey recommends that unified administration and supervision of all the educational work be secured through the appointment of a City Secretary of Education. Under this officer the work at each branch should be in charge of an educational secretary, who should be selected because of his fitness to direct the special type of work under his charge. His position should be that of a professional educational supervisor. He should be relieved of much of the duties of promotion and publicity which now constitute the greater part of the work of the educational secretaries of the branches. Pending the segregation of the work in three branches, expert supervision of the materials and methods of instruction could be secured without undue expense by employing qualified men on a part-time basis. Supervision should be placed upon a constructive professional basis, for the purpose of improving the work of teachers in service. Such supervision as is now given is limited in amount and in no case has been found to be above the level of inspection.

IV. *Educational Research.*

The survey recommends that a Bureau of Research be established to study the educational needs of adult men, employment conditions and demands, the extent to which the courses offered are meeting these needs, and various other problems of organization. The services of such a bureau would not be confined to education alone. A man well trained in personnel work should be in charge directly under the General Secretary. Through this bureau a uniform system of records

should be developed for use in all branches for the purpose of securing reliable, complete and comparable data to be used in the studies conducted through the bureau.

V. *The Teaching Staff.*

It is recommended that every effort be made to secure the best possible teachers in every subject. Instruction is at the very heart of education. Practical knowledge and skill in the trade or profession are essential but do not assure ability to teach. In selecting teachers, attention should be given to special training and experience in teaching, and preference should be given those who have had these. Training should be given teachers in service, either in large or smaller groups, both for the sake of the improvement of specific teaching ability and of developing a professional group morale. A higher salary scale than is found in most of the Association schools is necessary to attract and hold the most competent teachers. The policy of paying adequate salaries to the best men who can be found would ultimately justify itself as sound business practice. Teachers should also be encouraged to take additional training in education or in trade and professional schools. Teachers in public schools are encouraged and in some cases required to take such courses. Such efforts at self-improvement should be rewarded by permanent salary increments.

VI. *Guidance, Placement and Follow-up.*

One of the most important recommendations of the survey is that a Bureau of Guidance, Placement and Follow-up be established, under the control of a director for the city. A broad conception of vocational education includes not only the instruction of men in class or shop, but also careful guidance before entering upon a course and placement in jobs adapted to their abilities and special interests in which they will find personal satisfaction and will perform work of social value. Some of the funds now spent for publicity and advertising, if transferred to the support of this bureau, might be expected to yield larger promotional returns which would be cumulative through the years to come.

As one reads the entire report he should have in mind, as did those who conducted the survey, that the educational work of the Y. M. C. A. is almost exclusively in the field of adult and continuation education. In this important respect this survey is unlike other educational surveys which have dealt with schools whose organization and methods have been standardized by long years of experience. So far as the

procedure in these two types of schools is dissimilar, there were no precedents to follow. Much credit is due to the Y. M. C. A. for the initiative displayed in thus launching forth on uncharted seas. Many of the defects noted are the inevitable results of such an adventure. But the public schools and other agencies are now seriously undertaking the task of adult and continuation education. Experience is showing the way to more effective methods in this field. The Y. M. C. A. has here an unusual opportunity for service in the trying out, testing and refining of methods of meeting the educational needs of adult men.

THE DISCIPLINARY VALUES OF STUDIES IN THE OPINION OF STUDENTS *

By E. L. THORNDIKE

Institute of Educational Research, Teachers College

The disciplinary value of a study or other activity may be estimated from observations or measurements of the changes produced in pupils by it, from a psychological analysis of it in the light of general facts and principles concerning the influence of improvement in one mental function upon the status of other functions, or from the testimony of individuals concerning the benefits received from it.

The last method is the least satisfactory in most respects, but it is by no means worthless; and it has the special interest of being the method which, directly or indirectly, has been the source of most past and present ideas and practices in respect of disciplinary values. The advocates of the disciplinary value of Latin or Geometry or Laboratory Observations or Drawing or Manual Training have, it is true, often defended their doctrines by some general psychological theory, but these doctrines probably had their source in a personal sense of the benefit due to the subject or in an acceptance of the testimony of somebody to that effect.

In this article I shall present the testimony of several hundred individuals, so obtained and so arranged as to provide a clear and measurable picture of it. The individuals concerned are in the main teachers, principals and superintendents of schools.

Consider the following sample experiment. Seventy-eight men teachers or school officers, all college graduates and all familiar with the present-day disputes and arguments concerning mental discipline, were asked to "Rank the studies and activities listed below, according to the amount of disciplinary value (per hour of time spent) to you at the age of fourteen to eighteen. Mark the study or activity which you think had the most value to you, 1; the next most, 2; and so on. If two or more are indistinguishable, draw lots as to which shall be ranked highest. If you had no experience of the study or activity at

* The investigations reported in this article were aided by a grant from the Commonwealth Fund.

the ages in question, estimate as best you can the values which it would have had, if you had engaged in it."

English Literature
English Composition
History
Algebra
Geometry
Latin
Science
Athletic Sports
Unskilled Labor (such as waiting on table or washing dishes)
Skilled Labor (such as carpentry or millinery)
Teaching

The reported ratings appear in Table I. They show several noteworthy facts (which, I may add, are shown by all similar experiments that I have made). First, there is an extreme variety of opinion, each study and activity occupying almost every position from the top to the bottom.[1] Assume for the moment that these testimonies represent the reality. Then we have the startling conclusion that each of these studies is, for some persons, the best and also the worst disciplinary agent of the eleven. Nor is this incredible.

This variety of testimony comes as a shock to those who participate in the experiment. The person who ranks Algebra 1 and Skilled Labor 11, for example, finds it had to believe that anybody should be so ignorant or perverse or misled as to rank Algebra 11 and Skilled Labor 1. And conversely. Each tends to think that the other is wrong! Gradually the facts of Table I open his mind.

This variety of personal experience and opinion explains much of the dispute and misunderstanding concerning disciplinary values. A person who is honestly sure that he gained much from Latin and little from History, imputing his experience to others, simply cannot endure the assertion that Latin has no greater disciplinary value than history. Facts like those of Table I are useful to show him his fallacy.

The second noteworthy fact shown by the table is the vote of the consensus that, hour for hour, Teaching is, as discipline, the most valuable of the eleven activities. Here again, Table I is representative of similar tables from similar experiments. A group of teachers will

[1] Position 2 for Latin and position 10 for Science are the only vacant places. These would have been filled if there had been a few more individuals reporting. They were filled in, in the case of 32 women who took part in the same experiment.

TABLE I

RANKINGS OF ELEVEN STUDIES AND ACTIVITIES FOR DISCIPLINARY VALUE BY SEVENTY-EIGHT MEN ENGAGED IN EDUCATION

	English Literature	*English Composition*	*History*	*Algebra*	*Geometry*	*Latin*	*Science*	*Athletic Sports*	*Unskilled Labor*	*Skilled Labor*	*Teaching*
1	4	9	3	3	1	3	18	5	1	2	29
2	7	4	11	6	16		10	5	2	7	11
3	8	14	8	8	5	2	9	8	3	3	11
4	7	5	13	4	6	4	19	5	4	5	6
5	7	8	9	5	11	5	5	15	6	5	2
6	12	3	10	9	9	5	4	6	6	8	6
7	10	8	5	7	7	5	5	13	4	13	2
8	5	10	4	13	8	10	3	4	7	9	4
9	2	13	4	10	6	13	3	8	6	10	2
10	14	3	5	11	5	11		6	6	13	3
11	2	1	6	2	4	20	2	3	33	3	2
Median Rank	6	5	5	7	5–6	9	3–4	5–6	9–10	7	2–3

There are three discrepancies of one each between the sums of columns and the sums of rows in this table. These could not be located because of the destruction of the original records. Their correction would not alter any of the medians. They carry over to Table II, but there again their influence is practically nil.

rate Teaching above any study for the age in question. Perhaps a group of lawyers would so rate the practice of law; a group of musicians would so rate the practice and performance of music; a group of scientists would so rate scientific research; a group of business men would so rate the work of business.

This high rating of teaching by our group is probably due in part to other factors than the natural estimation of the thing we have chosen to do, and of the value to us of early training at it. I shall show in a later section of this report that, contrary to the traditional conception, there is a marked positive correlation between disciplinary value and interest, as estimated by personal testimony. Other things being equal, what one liked disciplined one's mind. Teaching belongs high for discipline in this group in part because of the factors that made it liked by this group. We shall see shortly that, for this group, the exercises in Latin and Mathematics which were designed largely to train the mind are less well thought of than the haphazard training of work and sports. The "reality" of the latter seems to compensate for their lack of planful discipline. Teaching is then ranked high, partly because of its "reality."

Although Table I shows an extreme variety of individual testimony, certain general tendencies of the group are clear. Teaching is first; Science is next; Unskilled Labor is lowest; Latin is next to it; the other studies and activities are about on a par. The traditional superiority of Latin and Mathematics as disciplines finds no support whatever in this group. The traditional assumption that lessons train the mind much more than life does, finds little support. If we compute totals for the seven studies, on the one hand, and for the four non-studies on the other, we have the results of Table II.

Consider now an attempt to estimate *how much* more disciplinary value is imputed to a subject or activity that is ranked high than to one that is ranked low. A group like that described above, save that the women's ratings were also used, received the following instructions. "Calling the disciplinary value (per hour of time spent) of English Composition 10, estimate as best you can the disciplinary value to yourself at the age of fourteen to eighteen of English Literature, History, etc., (in each case per hour of time spent." The subjects and activities in this experiment included Drawing, but excluded Athletics, Unskilled Labor and Skilled Labor. Each of an individual's ratings was divided by the sum of them all, giving us for each individual 100 credits of value distributed according to his judgment among the nine subjects and activities.

The great variety of opinion shown by the rankings appears even more emphatically in these ratings for amount. English Composition, for example, receives amounts from 1 to 23; English Literature, from

TABLE II

VALUATION OF SEVEN STUDIES AND OF FOUR NON-STUDIES

RANK	NUMBERS		PER CENTS			
	Studies	*Non-Studies*	*Studies*		*Non-Studies*	
1	41	37	7.5		11.9	
2	54	25	10.0		8.0	
3	54	25	10.0	47.1	8.0	43.3
4	58	20	10.6		6.4	
5	50	28	9.2		9.0	
6	52	26	9.5		8.3	
7	47	32	8.6		10.3	
8	53	24	9.7		7.7	
9	51	26	9.3		8.3	
10	49	28	9.0		9.0	
11	37	41	6.8		13.1	

TABLE III

ONE HUNDRED RATINGS OF EIGHT SUBJECTS AND TEACHING BY ONE HUNDRED TEACHERS, SCHOOL OFFICERS AND ADVANCED STUDENTS OF EDUCATION

AMOUNT OF VALUE	SUBJECTS								
	English Literature	*English Composition*	*History*	*Algebra*	*Geometry*	*Latin*	*Science*	*Drawing*	*Teaching*
0.0 to 1.9	3	2	5	5	5	10	1	16	
2.0 to 3.9	7	9	8	11	14	10	5	17	
4.0	14	8	10	17	8	13	10	21	
6.0	13	24	19	15	10	8	11	19	2
8.0	15	17	16	14	20	12	6	9	5
10.0	16	17	14	12	14	10	16	6	4
12.0	11	8	13	11	9	12	11	4	6
14.0	3	5	7	5	11	11	14	3	4
16.0	3	3	3	4	5	8	5	4	6
18.0	5	4	2	3		3	8		7
20.0	2	2	1	1	1	1	4		8
22.0	1	1			2	1	1		8
24.0	1		2				2		3
26.0	2			1					5
28.0	3			1	1	1	4		6
30.0 to 39.9			1				1	1	17
40.0 to 49.9	1								8
50.0 to 59.9							1		2
60.0 to 69.9									4
70.0 to 79.9									2
80.0 to 89.9									3
Median Value	9	8–9	8–9	8	8–9	9	11–12	5	23–24

1 to 41; History, from below 1 to 36. The general drift of the consensus, as shown by the median ratings, is much like that of Table I. Teaching has a median credit of 23–24; Science comes next with 11–12; the other subjects are about alike except Drawing, which is valued much less. The essential facts appear in Table III.

We may now consider briefly the results of other similar experiments. Table IV presents the median ranks and Table V presents the median ratings, repeating for convenience those of the two so far described. Any one group appears only once in Tables IV and V; if it gave ratings for amount of value it appears only in Table V. If it gave rankings in order for value, it appears only in Table IV.

Tables IV and V show that the general drift of the testimony is toward approximate equivalence of studies (except Drawing) in disciplinary value per unit of time spent. In particular, the Mathematics

TABLE IV

MEDIAN RANKINGS OF STUDIES AND ACTIVITIES FOR DISCIPLINARY VALUE TO ONESELF AT THE AGE OF 14 TO 18

GROUP	SEX	N	STUDIES AND ACTIVITIES										
			English Literature	*English Composition*	*History*	*Algebra*	*Geometry*	*Latin*	*Science*	*Athletics*	*Unskilled Labor*	*Skilled Labor*	*Teaching*
I	Men	78	6	5	5	7	5–6	9	3–4	5–6	9–10	7	2–3
II	Women	32	5	4–5	6	5	5–6	7	3–4	7–8	10–11	8	2
III	Mixed	47	5	5	4–5	7	6	8	3–4			3	2
IV	"	51	4–5	4–5	4	3	2–3	5	4				
			Ranks of the Seven Studies										
I			5	2–3	2–3	6	4	7	1				
II			3–4	2	6	3–4	5	7	1				
III			3–4	3–4	2	6	5	7	1				
IV			5–6	5–6	3–4	2	1	7	3–4				

TABLE V

MEDIAN RATINGS OF STUDIES AND ACTIVITIES FOR AMOUNT OF DISCIPLINARY VALUE TO ONESELF AT THE AGE OF 14 TO 18

(The ratings are transmuted into terms of the approximate average rating for the studies, setting that at 10.)

GROUP	NUMBER	STUDIES AND ACTIVITIES														
		English Literature	*English Composition*	*History*	*Algebra*	*Geometry*	*Mathematics*	*Latin*	*Science*	*Physical Science*	*Biological Science*	*Drawing*	*Athletics*	*Unskilled Labor*	*Skilled Labor*	*Teaching*
V	100	10½	10	10	9½	10		10½	13½			6				27½
VI	52	13½	11½	15	10	10		6	19					5	26	33½
VII	32	9½	9½	10	10	10		9½	13½				10	5½	13½	24½

and Latin which have been advocated as notably superior in disciplinary value, have not so impressed teachers who have studied them. Moreover, school work in general has not impressed teachers as very much more valuable as discipline than such work as a high school pupil does for a wage if he stays out of school for a year, or works after school hours. Speaking roughly, the future teacher is considered to gain as much as he loses in mental discipline, if he stays out of school to

TABLE VI

OPINIONS CONCERNING THE ORDER FOR VALUE OR THE AMOUNT OF VALUE OF STUDIES FOR THE AVERAGE PUPIL, 14 TO 18 YEARS OF AGE

The entries represent median ranks in the first line (1 being high and 9 low); in the remaining lines they represent median amounts (4 being the lowest and 16–17 the highest)

Group	*Number*	*English Literature*	*English Composition*	*History*	*Algebra*	*Geometry*	*Mathematics*	*Latin*	*Science*	*Physical Science*	*Biological Science*	*Recruit in Army*	*Athletics*	*Unskilled Labor*	*Skilled Labor*	*Teaching*
Ranks																
III	47	5	4	4	6–7	6		8–9	3						3–4	4
Ratings of Amount																
VIII	51	8	10	8–9			12	5		12	11					
IX	44	9–10	10	9–10	9	10		8	12–13				8–9	4	9–10	16–17
X	45	10(Eng.)		9–10			13–14	10–11		11		12	9	6–7		

work. If he stays out of school to teach, he is held to gain very much more.

In some of the experiments, the individuals reported rankings or values not only for themselves, but also for the average high school pupil. Since these opinions have a certain general interest, they are reported here in Table VI. The order and amounts of values are much the same for the average pupil as for the combined selves of the groups of teachers save that the discipline from teaching is set much lower. Attention is invited to the fact that even the men of a very conservative group, such as the principals of eastern private schools (Group X) impute in their ratings much less superiority to Latin and Mathematics than traditional opinion does, or than they probably would do if they had been asked the question in general terms.

These ratings for the average pupil in high schools have a special interest when put into relation with the ratings for oneself, since the closeness of the correspondence is evidence of the extent to which a teacher tends to estimate disciplinary values in general by his opinions about the effect of studies on himself.

The median correlations obtained are:

.69 for 47 advanced students ranking the seven studies of Table IV, teaching, and work, such as a high school pupil might obtain.

.72 for 63 principals and teachers ranking the seven studies of Table IV.

.72 for 51 advanced students ranking the studies of Table IV, with Mathematics, Physical Sciences, and Biological Sciences in place of Algebra, Geometry, and Science.

.65 for 12 principals of private schools ranking English, Mathematics, Latin, Physics, and History.

We may set the obtained correlation at about .70 with a P.E. of about .01. Teachers do then form their opinions of the disciplinary values of subjects for pupils in general in harmony with their opinions of the effects which these studies had on themselves.

The Relation of Discipline to Interest

If an educated adult ranks studies or activities in order according to the amount of disciplinary value which each had for him (per hour of time spent) at the age of 14 to 18, and then ranks them according to the degree of interest which each had for him at that age, we can use the two rankings to estimate how far disciplinary value and interest were correlated or opposed in his case. The sum of the differences in the ranks or the sum of the squared differences in the ranks may be used in the computation. We have used the former to economize time, since the crudity of the data makes refined computations unwise.

For example, suppose that an individual's rankings are as shown in the first two columns of Table VII. Then the differences are as shown in column three, their sum is 10 and the correlation is .93. The formula used is:

$$r = \sin(\pi/2)\, R$$

or

$$r = 2\cos(\pi/3)\,(1-R) - 1$$

wherein

$$R = 1 - \frac{3\,(\text{Sum of the differences in ranks})}{n^2 - 1}$$

n is, of course, the number of subjects or activities ranked.

We have computed the correlation in some hundreds of individuals. It varies very widely, from +1.00 to −1.00; that is, from cases where the ranking for interest is identical with the ranking for disciplinary value to cases where the former is the exact reverse of the latter. The general tendency is, however, toward a marked positive correlation or resemblance.

When the ratings are for the eleven subjects and activities listed above, the median resemblance is .61 for a group of 78 men; it is .68

TABLE VII

	Rank for Disciplinary Value to John Doe	*Rank for Interest to John Doe*	*Difference*
English Literature	3	4	1
English Composition	8	6	2
History	2	2	0
Algebra	10	10	0
Geometry	11	11	0
Latin	7	9	2
Science	1	1	0
Athletics	4	3	1
Unskilled labor	9	8	1
Skilled labor	5	7	2
Teaching	6	5	1
			10
			$r = .93$

for a group of 32 women; it is .57 for a mixed group of 93, mostly women; it is .77 for a group of 263, mostly men. The unweighted average of these resemblances is .66 with a P.E. of .03.

In other groups where the ratings were for only the seven studies of the above list, we find the following: The median resemblance is .78 for one group of 34 men; it is .65 for a mixed group of 51; it is .59 for a mixed group of 36. The unweighted average of these resemblances is .67 with a P.E. of .03. In other groups where the ratings in Algebra, Geometry, and Science were replaced by Mathematics, Physical Sciences, and Biological Sciences, the median resemblances were: .80 for a mixed group of 51, and .50 for a group of 35 male principals of private schools in the east. The average is .65 with a P.E. of .07. In a mixed group of 47 where the ratings were for the seven studies of Table IV, Skilled Labor and Teaching, the resemblance was .57. In a mixed group of 100 where the ratings were for the seven studies of Table IV plus Drawing and Teaching, the resemblance was .60. On the whole the resemblance averages .65 with a probable error of $\pm .02$.

A resemblance measured on the basis of ratings that are subjective and from memory is influenced by certain sources of error. First there are all the causes which give the ratings a variable error, a general inaccuracy, as likely to raise any subject unduly as to depress it unduly. Such are the general inaccuracies of one's observations of his interests and of the influence of a study upon his powers, of one's inferences from these observations, and of one's memories; and those due to inadequate data to be observed and remembered. The errors

due to such causes are undoubtedly large. They act to reduce the obtained resemblance from the true resemblance (or antagonism) toward zero. Their removal would raise the correlation found from .65 toward some higher point.

Second, there are all the causes which give the ratings constant errors, or prejudices toward or against likeness between disciplinary value and interest. We do not know what these are, nor whether their total effect has a balance toward likeness or against it. The general doctrine instilled by teachers and books on education has been that the disagreeable is salutary and disciplinary, and the writer had the impression during these experiments that the individuals concerned were much surprised to find the consensus in favor of a resemblance between interest and disciplinary value. It seemed to him that they were somewhat surprised to find that their own records showed resemblance, and expected the group as a whole to contradict them. On the other hand, there seems to be a general human fallacy in making ratings whereby we impute to every aspect of a thing somewhat of its general excellence or inferiority; and this may act to make a person who esteems, say, Mathematics in general rate it more highly both for disciplinary value and for interest that the truth would warrant.

On the whole it seems probable that the true resemblance is at least as likely to be above as to be below the resemblance computed from the reports. The discipline from enduring the disagreeable seems to be far outweighed by the discipline from working with an interested will along lines that fit one's abilities.

AN EXPERIMENT IN A RURAL SCHOOL

By FANNIE W. DUNN
Assistant Professor of Education, Teachers College
and MARCIA EVERETT
Instructor in Allamuchy School

There are two quite distinct types of educational organization; the graded school system of the city and the "ungraded" or one-teacher" type of the rural schools. In the former, children are assembled into groups of fairly homogeneous mental ability and educational achievement, so that a number of them may be instructed at the same time in the same subject. In the latter, there are usually fewer children assigned to one teacher, but these children vary widely in age and advancement, usually ranging from the first grade through the eighth.

Which organization is most effective? The results of all the state school surveys so far made point in the same direction, the average achievements of pupils in town and city graded schools being invariably notably in advance of those in schools of one or two teachers. For this reason, as well as for administrative efficiency, consolidation is generally urged, and is making important progress throughout the United States. However, it is generally recognized that there are numerous areas in which, because of especial sparsity of population or of physiographic barriers and climatic severity, complete consolidation is not and so far as we can now see may never be practicable. The Bureau of Education has offered a guess that the present number of nearly 200,000 one-teacher schools may eventually be reduced to 40,000. It will be seen, therefore, that the problem of education in one-teacher schools, though its extent may be very much reduced, will probably continue to affect close to a million children annually and thus remain an important consideration for the nation.

The New York State Rural Survey Report states with regard to this situation: "Where such enlarging of the school district is not feasible, heroic efforts should be made to bring to these smaller schools the necessary conditions for improved work at whatever cost."

The question then remains whether means and methods may be devised whereby the advantages and potentialities inherent in the one-teacher situation may be used to counterbalance or overcome its disadvantages and limitations. Where it is out of the question to centralize the school population by means of transportation so as to provide a graded organization, with a teacher to each one or two grades, is it possible, even with "heroic efforts," to provide elementary education as rich and thorough as possible under average graded school conditions, or is it an ugly but unavoidable fact that where schools of the one-teacher type are inevitable, their pupils must be sacrificed to the need of society as a whole that the nation shall be fed and provided with raw materials?

Frankly, we do not know. Certainly one-teacher schools to-day are deficient in measurable achievement. It is equally true, however, that they are deficient in practically all the conditions that make for efficiency. It is too well known to require elaboration here that in teacher qualifications, supervision, textbooks, equipment, physical and hygienic provision, and length of term, they are below, often markedly below, national standards. It is not so generally realized that less progress than in graded schools has been made in adapting courses of study, textbooks, methods, and devices to rural school needs. As a matter of fact, practically all the developments that have been made have been in graded schools, because of their superior teaching and supervising staffs, and are, therefore, specially adapted to graded school conditions. Before we can determine the possibilities of effective education in the one-teacher school it becomes necessary, therefore, to develop or adapt means and materials suited to its peculiar conditions, utilizing what potentialities and advantages it may have. This having been done, it is further necessary to apply these means and materials in situations where teacher, equipment, term, and supervision are standard in order to discover whether by means of standard provisions applied in ways adapted to their needs, one-teacher schools can hope to approximate standard results.

The first of these steps is being undertaken in the Experimental Rural School of Teachers College, through the generosity of Mr. Felix Warburg, who in 1921 made it possible to enter upon a five year program for the development of teaching procedures adapted to one-teacher school conditions. The second step we hope may be undertaken at the end of the initial five year period, through the cooperation of progressive superintendents, supervisors, and teachers who will give

the plans trial in one-teacher schools in other rural situations. Already connections are beginning to be made for this purpose.

The Experimental Rural School is located in the old Quaker Grove Schoolhouse, Allamuchy Township, Warren County, in northern New Jersey. The population of the neighborhood is divided as to occupation between dairying, on the rolling and hilly land, and trucking in the "muck" sections, and includes a considerable number of Polish families, engaged, in the main, on the truck farms.

So far as the upper grades of the school are concerned, the distribution of pupils among classes may be matched in hundreds or thousands of rural schools in almost any section of the Union.

There are this year, for example, three pupils in the eighth grade, five in the seventh, two in the sixth, two in the fifth, and eight in the fourth. The lower grades, however, have been increasing in size ever since the experiment was begun, due to the increasing number of Polish families, largely young people, with children under ten years of age. There is, therefore, an unusual proportion of pupils in the first three grades, which total thirty in number. This heavy load of primary pupils, while it makes the work more difficult, has had the advantage of compelling steady attention to the first and second grades, a group commonly much neglected in one-teacher schools. It has also given considerable opportunity to experiment with materials for unsupervised occupation suitable for use in one-teacher schools.

One of the first problems attacked was that of developing a daily schedule such that the primary grades might receive a larger proportion of the teacher's time than is usually given in schools of this type. Dr. Reinoehl, in a survey of daily programs recommended in State courses of study, found that an average of 140 minutes a week, or only 28 minutes a day, was allotted to the first grade, while the seventh grade received 275 minutes a week, or 55 minutes a day. Theoretically at least, the pupils who most need teacher attention are those of the first two or three grades, who have least control of the tools of learning, least training in habits of study, and least ability to work independently. In practice, as has been shown, the conditions are exactly the opposite.

Ever since the Experimental School project was initiated, a program has been in effect, with minor changes from time to time to correct discovered defects, which gives approximately two hours daily instruction to each grade, but provides for a larger per cent of study time for more advanced than for primary pupils. The latest revision of this program is here presented:

	Min.	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*
9:00–9:25	25	Opening Exercises and Health Inspection				
9:25–9:45	20	Read. 1	Read. 1	Read. 1	Read. 1	Read. 1
9:45–10:05	20	Read. 2	Read. 2 and 3	Read. 2	Read. 2	Read. 2 and 3
10:05–10:20	15	Eng. C	Eng. C	Eng. C	Clubs	Eng. C
10:20–10:40	20	Eng. A	Eng. B	Eng. A	"	Eng. B
10:40–11:00	20	Recess: Free play, except as noted below				
		Phys. Ex. 3 and 4	Phys. Ex. 1 and 2	Phys. Ex. 3 and 4	Phys. Ex. 1 and 2	Phys. Ex. 1, 2, 3, 4
11:00–11:20	20	Read. 3 and 4	Arith. B	Read. 3 and 4	Read. 3 and 4	Ind. Arts A and B } 55 min.
11:20–11:40	20	Arith. A and B	Arith. A	Arith. A	Arith. B	
11:40–11:55	15	Arith. 2 and 3	Arith. 2 and 3	Arith. 2 and 3	Arith. 2 and 3	
11:55–12:10	15	Ind. Arts C	Ind. Arts C	Ind. Arts C	Ind. Arts C	Arith. 2 and 3
12:10–1:10	60	Noon Hour—Hot Lunch				
1:10–1:25	15	Spell. 2 and 3	Phon. 2	Spell. 2 and 3	Phon. 2	Spell. 2 and 3
1:25–1:50	25	Phon. and Read. 1	Phon. and Read. 1	Phon. and Read. 1	Phon. and Read. 1	Phon. and Read. 1
1:50–2:05	15	Writ. C	Writ. A and B	Writ. C	Writ. A and B	Writ. C
2:05–2:15	10	Music C	Music C	Music C	Music C	Music C
2:15–2:20	5	Recess and Dismissal of Grades 1 and 2				
2:20–2:45	25	Nat. St.	Mus. and Phys. Ex. A and B	Nat. St.	Mus. and Phys. Ex. A and B	Mus. and Phys. Ex. A and B
2:45–3:00	15	Spell. B	Spell. A	Spell. B	Spell. A	Spell. A and B
3:00–3:20	20	Geog. B	Read. 4 and 5	Geog. B	Geog. B	Read. 4 and 5
3:20–3:40	20	Geog. A	Read. A	Geog. A	Geog. A	Read. A
3:40–4:00	20	Read. 5 and 6	Hist. 7 and 8	Read. 5 and 6	Hist. 7 and 8	Hist. 7 and 8

It may be asked whether this program does not unduly sacrifice the pupils of the upper grades to those of the lower. The answer is best given in terms of standard measurements. In the spring of 1921, the Thorndike McCall Reading Test, Haggerty Sigma 1, McCall's adaptation of the Ayers spelling test, and the Woody-McCall test in arithmetic fundamentals were given to the school. Excepting in the case of fourth grade reading, which was above standard, every grade in the school was below standard in every subject. In the fal of 1921, the experimental project v - begun. By the Stanford Achievement Tests, given in the fall of 1923, only one of the seven upper grades is now below standard. In the two yearly promotion periods since the school was taken over, only six of these pupils have failed of promotion, and five have received double promotion, while two have had double promotion in part, though not in all, of the school subjects. During the two years, 1921-1923, the progress in Reading Comprehension, as measured by the Thorndike McCall Test, for all the grades from third grade on, was three and four-fifths years, and in arithmetic fundamentals, as measured by the Woody-McCall Test, was approximately three and one-half years. The greatest progress, however, we believe is in fields where adequate measures are not yet developed, in interests and in powers of self-direction and group control. From all the indications available, the older pupils have in no sense been sacrificed to the younger, although much more provision has been made for the latter than can easily be found in country schools elsewhere.

An examination of the daily program will show that the organization of the school is by groups, rather than grades. Various combinations of grades have been tried, and the present one, which is the result of these trials, is proving practicable and effective, and gives promise of warranting permanent adoption. This organization divides the eight grades into three groups, A, B, and C respectively, the third group, C, being subdivided into two for the tool subjects, reading, spelling, and number. The upper group, A, has from the first consisted of the sixth, seventh, and eighth grades, a combination which has proved feasible and effective with very different relative abilities in its constituent grades during the three years. Group C originally was composed of the first three grades, but this combination has been rejected as unhelpful and ineffective. The third grade pupils are too advanced, both in intellectual maturity and in educational achievement, to be limited in their experiences by working only in the same group with those of the first grade. Moreover, the numbers of pupils in the primary grades

exceed, and is likely in most schools to exceed, those in any other equal time-range throughout the school. For this reason, the third grade is now being tentatively grouped with the fourth and fifth for a portion of its work. Present indications are that during the first two or three months of the school year, the third grade works profitably with the second grade, but that it then enters upon a period of rather rapid growth, and for the rest of the year needs a constantly increasing amount of its work in group B, with the fourth and fifth grades. Curriculum material is now being developed on the basis of this hypothesis.

Exceptions to the general scheme of grouping are reading, music, nature study, writing, physical training, and industrial arts, including drawing. All of these except reading are handled in two groups instead of three, the lower group including grades one to three, and the upper grades three to eight. Third grade pupils are thus provided with a very flexible situation. They may meet with both groups, thus having double opportunities where it seems desirable, and, since they are not as yet able to do much study from books, it is possible for them in a six-hour school day to find the time for much of this. They may, if they are weak in any one of the two group subjects, meet with the lower group alone; while, if they are strong, the opportunity is available for concentrating their work with the upper group. One type of arrangement may be made with one or part of the subjects, and a different one with the remainder.

The present reading organization has been reached after trying several plans, and promises to be very satisfactory. By it each grade above the first and below the seventh reads part of the time with the grade below it and part with that above it. Thus the second grade reads two days each week with the third grade, using text books of standard second grade difficulty, and three days alone or with advanced first grade pupils, if there are any, using easy second grade or advanced first grade texts. Similarly the fourth grade has three weekly lessons with the third grade in third grade texts and two with the fifth grade in fourth grade texts, and so on through the sixth grade. From the third-fourth grade group up through the fifth-sixth, the reading material used includes both literature and history, history receiving no treatment as a separate subject until the seventh and eighth grades. The upper group, A, composed of sixth, seventh, and eighth grades, uses only literary material in its reading period.

Adaptations of the reading course of study to individual differences are made by means of audience reading, a Book Club with monthly

book reports, and individual silent reading with various types of checking devices, as well as by a large amount of library reference work, especially in connection with geography. Not only are supplementary geographical readers used, but important historical relationships of each country are included in the geography course of study. Improvement in the ability to use reference material has been very marked. The encyclopedia is a familiar friend; it is the rule rather than the exception for pupils from the fifth grade up to use at least one supplementary text in preparing a day's assignment in history, hygiene, or geography; and certain elementary books dealing with man's provision of food, shelter, and clothing have recently been criticized by the A group pupils because they "don't have anything in them," the class finding Smith's Industrial and Commercial Geography more to their liking. The average reading age, from the fifth grade up, is 13 years and 4 months, while the average chronological age is 12 years and 9 months.

Whereas the increase of teacher time per primary grade has apparently not sacrificed the advancement of the older pupils, it has not yet achieved satisfactory results in the primary grades. The achievement of the pupils of the first four grades is still below standard when compared with their chronological ages, although it is above grade standards in second and fourth grades, and only one-tenth of one year below in the third grade. This retardation is certainly due in part to the large proportion of children from Polish farm homes, these numbering eleven children out of eighteen. However, the fact that the educational advancement, or Be, of the group is slightly below their mental capacity, or Bi, suggests that further improvements in curriculum and teaching method may bring better results.

Indeed, throughout the school the achievement as measured by the Stanford Test is not yet on a parity with the capacity. The average Bi is 48, Be is 47, and Fe is 48. Bi indicates quality of intelligence, Be quality of achievement, and Fe extent to which capacity is being used. Certain outside factors, such as a heavy amount of daily home work for a number of the pupils, prolonged absences of a few for labor on the truck farms, and probably also the foreign language handicap for many, serve to reduce the Fe. Some of the retardation, of course, was accumulated before the fall of 1921. Whether all the deficiencies are accounted for by these considerations, or whether further improvement in materials and methods of instruction will serve to cancel them, remains to be seen.

It is confidently expected that some improvement will be effected

through continued curriculum development. A grouping plan, such as is in effect in this school, needs for its greatest effectiveness a curriculum organized by groups rather than by grades. Time has not yet sufficed to perfect such an organization, so that while in some subjects materials are at hand for the most effective use of the time of pupils and teacher, in others temporary makeshifts have perforce had to be employed. Considerable progress has been made during the last six months in this respect, so that conditions for instruction will be more favorable hereafter than they have been heretofore.

The organization of the school by groups has been the chief means so far described of providing better opportunities for instruction. Certainly it is an important one, for two reasons. In the first place, by the grade organization, the teacher's time is so subdivided that she finds herself with thirty, forty, or more classes daily, and class periods varying from one to perhaps twenty minutes in length, with ten minutes as a probable mean. Unless this situation is remedied, anything more than perfunctory hearing of text-book lessons is practically impossible. In the second place, where the organization is by grades, the small number of pupils in a class removes the stimulation and inspiration that comes from wholesome emulation and interaction of mind with mind. Both of these difficulties are remedied by the grouping of grades, which at the same time decreases the number of classes and increases the number of pupils composing a class, yet does not, in typical one-teacher schools, make of the combined grades a class too large for effective instruction.

There is another type of procedure, gradually coming to public attention during the past decade, which has large promise for the one-teacher school. This is individual instruction. For this the one-teacher school has especially favorable conditions, since its number of pupils per teacher is usually less than in the graded situation. The rural experimental school has delayed making much use of individual instruction, for the reason that materials for this purpose are being developed by a number of educational workers, as for example Washburne in Winnetka, Sutherland in Los Angeles, and Burk, the pioneer in this field, in San Francisco, and it has not seemed economical to attempt to duplicate their efforts. Such individual material as is available has been utilized. The Studebaker and Courtis practice tests in arithmetic have proved very effective and practical for pupil administration. Certain self-checking exercises for reading, devised by Miss Zirbes and others, have been used and similar ones constructed. In

spelling, an adaptation of the Horn-Ashbaugh method has been employed. Beyond this, until the present year, no special material for individual instruction has been used. However, the publication of such material of others' making continuing to be delayed, we have recently begun to organize a few most needed units of this type, especially in the field of arithmetic, but no more of this will be done than the situation urgently demands.

An important means of education, particularly for purposes of citizenship and character development, is the school club of one type or another, placing upon pupils definite responsibilities for leadership and group direction or control. This has been used in the Quaker Grove experiment with excellent results, both in discipline and in the development of initiative and independence. The pupils, at the beginning of the experiment, were on the whole well-behaved and the school management was good. But the administration was one of merely yielding to imposed authority. Instruction was received in the same spirit. There was no questioning, no suggesting of additional related ideas, the pupils' tones were timid and inaudible, and their statements usually concluded with a rising inflection, as if inquiring whether what had been said was what the teacher desired to be said. This condition will be recognized by experienced rural workers as of very common occurrence in rural schools.

By means of the Young American Club, organized in November, 1921; the Book Club, of later organization; and a large amount of committee activity in every phase of the school life, a fine social spirit has been developed, and the children have become exceedingly capable of carrying a large share of responsibility for the welfare of the group.

Two illustrations of this may be given. One day the teacher noticed a group of the older children earnestly conferring together, and finally they came to her with the statement, "We have to have a jury trial right away, S—— has been stealing again." S—— was a girl of borderline or imbecile mentality, whose petty thievery had several times been very annoying. The teacher, as tactfully as she could, explained that a jury trial would be of little use in S——'s case, since she would not be able to appreciate its seriousness, and would probably profit little if any from the penalty it might recommend. The children listened without protest, but withdrew again for conference, from which they returned with the decision, "Then S—— must have a guardian." And forthwith a guardian was appointed, one of the ablest pupils in the

school, whose duty it was to keep watchful oversight over S—— whenever she happened to be out of the teacher's sight. There was no more trouble from this source.

Perhaps a more significant series of occurrences, because of their helpful effect upon the pupil centrally involved, was in the case of C——, a boy of the upper grades, adolescent, emotionally unstable, and for various reasons which need not here be stated, probably the victim of an inferiority complex. His intelligence is at least normal, probably slightly above normal. He was a constant source of annoyance in the schoolroom, delighting in making peculiar sounds in his throat, stamping across the floor, talking audibly to himself if no one else would listen, and other similar performances. One day the Young American Club meeting proceeded as usual until the motion to adjourn was made. "No," then said the boy president, "I think there's something else we should do. C—— and W—— continually disturb the whole school." The teacher said, "I am glad you brought this up. Let us discuss it further. But first let me say how much I think these two boys have improved." The pupils agreed that there was some improvement, but did not think it adequate. Then the teacher went on, "Since you feel you are being disturbed by two members of the community, what are you going to do about it?" The children suggested that the offenders' seats should be changed, but to a request for suggestion as to what seats would be better, they could give no answer. The teacher pointed out that self-control is learned only by practice of self-control, and even were it possible to move the boys, she inquired whether it would be doing the offenders the most good possible. "Well, but something should be done," the children insisted. "C—— talks out loud, W—— shakes desks." So the discussion continued for an hour and a quarter, the children earnestly trying to find a way to bring two of their wayward fellows to terms. C—— was deeply affected by the experience. He sat with his head on his desk most of the time, furtively mopping away tears. But the discussion soon ceased to be personal. It became a heart to heart conference as to how to make "our school" better. One of the boys remarked at one time, "you know we may be making rules and punishments that will reach ourselves." It was at this meeting that the school instituted trial by jury, referred to in the preceding incident.

When the spring planting time came, W——, who was very old for his grade, the fifth, and who had reached the compulsory age limit, dropped out, and has not returned. But C—— continued to be a

member of the group, sometimes in very good standing, and sometimes the victim of one of his "spells." This was last spring. This fall his ups and downs continued, with continued disapproval from the group. Finally one day the teacher sent him out of the room on some pretext, and tried to lead the pupils to see that by certain teasing on their part they were making him worse, instead of helping him. The group decided to mend their ways in this respect. What with their help and their steady disapproval of his misconduct, C—— has been a model pupil for some time past. Recently, just prior to an election of officers for the Book Club, the group got together, without any suggestion from the teacher, and planned their meeting, with the result that, as soon as nominations were opened, one member at once nominated C—— for president, a second seconded the nomination, a third moved that the nominations be closed, and C—— was elected by acclamation to the second highest honor in the gift of the school. The significance of this act is particularly noteworthy in view of the fact that for months the group has not permitted C—— to hold an office of any rank, on account of his misconduct.

These are among the deeper and more serious manifestations of the socialization that has been developing in the school during the two years and a half that it has been in operation. Another type of manifestation is the large amount of free individual enterprise carried on with a minimum of inconvenience to the whole group and with the group's approval. For example, one day this fall the following activities were noted going on at one time: three boys were at the book case in the front of the room, two boys at the book case in the rear, four small boys were playing blocks in the play corner, several children were feeding their caterpillars new greens, a girl was straightening the teacher's desk, four girls were working on a doll village on the sand table, three children were at a table making a large map of the township, two at another table in the hall were doing the same thing, one child was playing with picture puzzle blocks, three children were building designs with colored blocks, eleven were having a class period with the teacher, and the remainder of the pupils were drawing, writing, studying, or using other available apparatus. Such active and intelligent use of time is by no means typical of rural schools in general, as any supervisor can testify.

Two reactions indicate the pupils' own evaluation of their school life. The C group were illustrating their penmanship lesson, which read:

"H is for Happiness, H is for Health,
Both together make the best kind of wealth."

One child:—"What *can* we draw for happiness?"
Several children:—"We are happy here at school. Let's draw ourselves."

A high school girl, who graduated from the school the first year of the experiment, and now visits it every holiday she has, "to learn how to teach a country school," said recently, "You get all your work done, and you have a good time besides."

The teacher says sometimes, "I feel as if I could do anything when these children are so wonderful." But they are only country children with an average Bi of 48, from ordinary farm homes, in a one-teacher school, who have, however, been given by a wise and kindly man a chance to grow and to help in the working out of means whereby other country children may have a similar chance.

A county superintendent wrote this fall after a visit to the school, "The best of it is there was nothing done but what any live teacher can do if she is willing to make the effort."

NEW STUDIES IN EDUCATION

The Springfield Survey [1]

The School Committee of the City of Springfield provided in their last annual budget for a survey of certain aspects of the public school system. The report of this survey undertaken under the direction of the Institute of Educational Research of Teachers College, Columbia University, has just been completed and the report presented to the School Committee by Dr. George D. Strayer, the Director of the Institute.

The report deals with three major problems:

1. The administration and supervision of schools.
2. The financing of education in Springfield.
3. The curriculum of the schools.

In the study of these problems, there were associated with Dr. Strayer, Professors F. G. Bonser, Thos. H. Briggs, N. L. Engelhardt, Patty S. Hill, and J. R. McGaughy. In addition to these members of the faculty who directed the work of the survey, there were fifty field workers employed in the production of the report.

A careful study was made of the administration of the schools in relation to the general municipal administration. The results of this part of the inquiry are summarized in the report in the following recommendations:

1. That the Legislature of Massachusetts be asked to enact a law which will give the School Committee [2] in Springfield complete control of the school system. That within a limit to be set by the legislature, the School Committee have a right to determine the tax levy for schools, to be collected at the same time and by the same officials who collect other municipal taxes. That the members of the School Committee be elected from the city at large rather than by wards.

2. That the School Committee be given complete authority for the erection of school buildings and for their operation and maintenance.

[1] *A Survey of Certain Aspects of the School System of Springfield, Mass.* Reported by G. D. Strayer and N. L. Engelhardt.

[2] In Massachusetts cities, the School Committee is the equivalent of the Board of Education in the cities of other states.

3. That the School Committee be authorized to develop a division of physical education and health service responsible for all such activities in the public school system.

Another type of inquiry concerning the administration of schools involved the work of the School Committee itself. The report in this regard, based upon a careful study of the transactions of the School Committee, recommends that there should be a clearer distinction made between the responsibilities of the School Committee itself and of their executive staff.

In the light of their study of the transactions of the School Committee, the survey staff recommended that in the conduct of its affairs it be guided by the following recommendations:

1. That the School Committee act as a committee of the whole in considering and in passing upon the program and particular recommendations of the superintendent of schools, and that all standing committees be abolished.

2. That the School Committee provide by its own rule that the adoption of textbooks and all courses of study be made upon the recommendation of the superintendent of schools, and that these matters be not referred to special committees.

3. That the School Committee require that the superintendent of schools report from time to time concerning the achievements and progress made in the school system in terms of (a) the adequacy of the attendance service; (b) progress of children in the school system, involving studies of retardation and elimination; (c) the adequacy of the adjustment of the school system to the needs of children in terms of the school organization, classification of pupils, the courses of study, the organization of special classes, and the like.

4. That the School Committee require that the superintendent of schools submit annually the budgetary recommendations based upon a careful study of costs in previous years, and taking account of such expansion as may be due either to increase in school population or to change in policies adopted by the board.

5. That the School Committee require the superintendent of schools to direct a continuing study of the need for school sites and buildings (such investigation to be undertaken by some member of his staff), and to report upon such points at least annually to the School Committee.

6. That the School Committee pass upon the plan for new buildings, approved by the superintendent of schools and his staff, and that all

such plans when presented be supported by evidence of present or prospective enrollment not otherwise adequately provided for, and in terms of the relationship of the facilities to be provided for in the new structure and the courses of study to be taught therein.

The survey staff found there was need for the appointment of an assistant superintendent, to be assigned from time to time to such work as in the judgment of the superintendent of schools needed to be done. They proposed, as well, that if the highest degree of efficiency is to be achieved, there should be established a research department which should carry on continually such investigations as are required by the School Committee or by the superintendent of schools.

In the consideration of the executive staff of the School Committee, it was proposed that subject to the enactment of the necessary legislation giving the School Committee charge of school buildings, there should be created the office of director of business affairs, and that under this executive should be placed not only the division of accounting and the purchase of supplies, but also the supervision of the erection, operation and maintenance of school buildings. The survey points out that it is the overwhelming practice throughout the United States to place school buildings under the control of the School Committee.

It was proposed also that subject to the enactment of the necessary legislation giving the School Committee control of medical inspection and health service in the school system, there be appointed a director of medical inspection and health service in the school system; that there be appointed a director of physical education and health service to have charge of medical inspection, physical and health education throughout the school system.

In the administration section of the report, attention was given as well to the work of supervisors and principals, and the recommendation was made that the work of principals be made a matter of special consideration by the superintendent of schools and his staff, to the end that those occupying this office shall make a larger contribution to the development of the school system.

Special sections of the report are given to the work of the attendance department, to the health service as it is now organized, and to the present status of teachers in the school system. Favorable comment was made on the work now done by the chief attendance officer and his assistants. Recommendations for the development of the division of census and attendance were proposed including the organi-

zation of a bureau of vocational guidance, more adequate reporting from the individual schools to the attendance office and more adequate coöperation with the courts.

In their report upon the teaching staff in the city of Springfield, the survey staff proposed that in employing teachers relatively less attention should be given to length of educational experience and somewhat more attention to desirable training for the particular work for which teachers are engaged. It was proposed as well that provision be made for further professional training for those teachers who do not now meet the higher standards that are commonly being accepted.

Other recommendations included the suggestion of providing somewhat higher salaries for teachers of superior merit, provision for increasing the professional training of principals and the suggestion that a somewhat more generous salary allowance in the few cases of prolonged illness be made by the School Committee in the light of the excellent showing made by the school staff.

A section of the report dealing with the records and reports kept in the school system shows the need for revision of this part of the service. The survey indicated that certain necessary records are not now kept and that it would be possible, by the improvement of some of those found, to increase the efficiency of the work of the administrative staff of the school system.

It was very clear, in the analysis of the administration of schools, that Springfield lacks one of the most desirable essentials which makes possible an efficient direction of educational affairs; namely, a complete and unified budget. Under the present plan, two budgets of the city government, one for public buildings and one for the health department, include approximately 28% of the total amount expended annually for schools. Thus the work of educating Springfield children is assigned to three separate departments of the municipal government. The survey staff recommended that estimates of revenues and expenses for schools be unified under one budget and that this budget be placed directly under the control of the School Committee.

It was the opinion of the survey staff that the existing budgetary control interfered with the work of the School Committee, that it divided unnecessarily the responsibility for the administration of schools, and it was ascertained that the procedure did not result in the economies which are frequently used as the argument for a unified city budget.

Other school boards in the United States which have control of their own budget do not spend more for education than do boards fiscally

dependent upon municipal authorities. This has been definitely proven in a study made this past year under the direction of the Educational Finance Inquiry Commission.[1] With an independent board, continuity of policy and far-sighted planning become possible to a degree which does not otherwise result. It was recommended that Springfield, along with over 75% of the other cities in the United States, recognize that the education of its youth is of sufficient importance to make such a continuing and progressive policy possible, under the direction of a fiscally independent school board.

The survey staff recommended that the accounting for all revenues and expenses, and for all receipts and expenditures for school purposes be transferred to the business office of the School Committee. This includes the transfer of amounts for capital outlay and debt service, for operation and maintenance, as well as for the current expenses of the school system. The survey staff have in their recommendations outlined a system of accounting with definite suggestions of improvements of the system which is in present use. It was also recommended that the buying and distributing of textbooks, supplies and equipment be placed directly under the control of the superintendent of schools and the School Committee. Approximately $118,000 was expended on textbooks, instructional and janitorial supplies for school purposes during the last fiscal year. The system of accounting for this money expenditure was well done but the system of accounting for the goods which have been purchased and distributed requires distinct modification and improvement. The survey staff has made recommendations which, if followed, will result in a better accounting of the materials which are utilized in the instructional service in the city.

The survey staff, in its report, touched only those phases of the school building needs of the city as have related themselves to the general administration of schools. Springfield has not developed a school building program which gives full consideration to the future as well as to the present school building needs of this city. It was also clear to the survey staff that school buildings have not been planned, even within recent years, as parts of a building program which considers sufficiently Springfield's future growth, trends in population, and other factors in city development. It was also clear to the survey staff that the most modern standards for school buildings and planning have not been given full consideration in the planning of new buildings.

[1] J. R. McGaughy's study on "The Fiscal Administration of City School Systems," Macmillan Company, New York City. 1924.

Without doubt, this failure to develop a scientific school building program, and the lack of adherence to modern school building standards in the erection of schoolhouses, are a direct result of the kind of organization according to which school affairs are administered in this city. The Property Committee of the City Government has rendered an efficient service, in so far as it was possible with the handicaps which would naturally arise out of the division of responsibility. Since this committee has no share in initiating and promoting the educational program, the school building problem has resolved itself into one of mere construction, without due emphasis upon the actual utilization of the buildings. The survey staff commended the City Property Committee for the excellent condition in which the school buildings were maintained. The survey staff recommended the placement of responsibility for the initiation and execution of all plans relating to the construction, operation and maintenance of schools in the hands of the School Committee and its administrative officers. It also recommended that the School Committee undertake the development of a school building program which will cover the immediate as well as the future needs of the city as far as they can be anticipated and which will give to the citizens a comprehensive concept of what the city will require in the way of school building development.

Space does not permit of a résumé of the recommendations made in the other phases of the public school problem which was studied in Springfield. The report gives constructive recommendations concerning the further development of the curriculum in the kindergarten, the elementary schools and in the junior and senior high schools.

The School Committee of Springfield has recommended the printing of the report. It is now in press and will be available in its complete form at the office of the School Committee, Springfield, Mass., by May 1, 1924.

Education in Bulgaria [1]

While the American student of education will find much in the school system of Bulgaria that is similar to that of France or Germany, there are nevertheless many points of special interest; and many of the common principles of educational administration found in the more familiar European countries, show interesting variations in this new setting.

In a measure it was by means of education that Bulgaria reëstablished

[1] William F. Russell, *Schools in Bulgaria*, Studies of the International Institute of Teachers College, Columbia University, No. 1. Teachers College, 1924.

its nationality. Five hundred years a slave of the Turk, Bulgaria had once had a distinctive culture. During the days of the First and Second Bulgarian Empires in the Ninth, Tenth, Twelfth and Thirteenth Centuries, Bulgaria had "assumed a rank among the civilized powers of the earth." The Slavic alphabet, the early Slavic literature, the distinctive Slavic church had all had their origin in Bulgaria. It was therefore possible for the advocates of Bulgarian freedom during the last two centuries to awaken the sleeping national consciousness of the Bulgarians by an appeal to the glorious history of the past as an indication of heights that were yet to come. This awakening was largely a matter of education; and even while Bulgaria was still under the Turkish yoke, schools of all sorts were founded all over the land. So effective was this, that at the time of the liberation (1878) there was already in operation an effective system of schools locally controlled and supported, but national in purpose.

With the independence of Bulgaria came a Ministry of Education and the introduction of ideas of school administration popular in Petrograd, Berlin, Vienna and Paris. To the locally controlled system was grafted the European idea of centralization, increasing in power and influence as time went on. Thus the student of education may see the interplay of centralized and decentralized control, public and private support, individual efforts and statewide standardization. Of the features common to most European schools, he may study with profit the careful training, appointment, and promotion of teachers; the technique of supervision; the system of lesson planning; the unified course of study; the longer and less concentrated attack upon the various school subjects; the definite and precise statement of the legal rights and duties of all school teachers and officials; and the curious fact that the added power of the teacher in Europe does not decrease the relative power of principals and inspectors. Of the features more distinctively Bulgarian, the student of education will find interest in the powers and duties of the local school committee; the system of removal of teachers by local referendum; the division of certain administrative powers among the teachers; the systems of grading, promotion and discipline; the course of study in history of a country on the cross roads of the world, where an outline of history like that of H. G. Wells would provide almost a national text book; the normal school curriculum; the system of marking; and the tolerance for the private school.

But the most interesting feature of education in Bulgaria has been

the development since the war. With the general upheaval following the treaty of peace, when the entire country was deeply discouraged, there came into power the Agrarian Party. This group, that had gradually gained power since the beginning of the century, was strictly partisan. Elected by the farmers, who composed 85% of the population of Bulgaria, it planned to give Bulgaria a government of the farmers, by the farmers and for the farmers. It was a radical "farm bloc" that in a vigorous and brutal way, took over the reins of government, introduced a class control and worked speedily and effectively. So quickly did they do their work and so thoroughly, that in three years' time they had become so unpopular that they were thrown out of office by a revolution that seemed to have popular approval.

The student of education will find interest in their work in the confiscation of property, limitation of landholdings, taxation, government banking, compulsory labor service and the like. But his main interest will be in the changes effected in the schools. For the Agrarians saw in the educational system only another opportunity for reform, and when they saw an opportunity they took it.

Homarchefsky, the Agrarian Minister of Education, was a great educational reformer, and while we may not agree with all he did, we can at least respect the ideals for which he stood and the astute way in which he put these ideals into practice. He reorganized the schools to care for rural life. He changed the emphasis from academic and humanistic culture to vocational preparation for the life of Bulgaria to-day. His aims were to make a school system that taught people to live; to substitute ideals of thrift, simple living, national pride, and vocational effectiveness for the academic ideals that had been. Much of this was only on paper; but a surprising accomplishment was made.

In short, Bulgaria is interesting from an educational standpoint. We see education as a means of national reëstablishment. We see the conflict of the European and Bulgarian educational ideals. We see the recent efforts at a complete redirection of education in the interests of rural folk. Whether or not we agree with these ideals and practices, we may still profit from their study in concrete educational situations.

Experimental Curriculum-Making in the Social Studies

About a year ago the directors of the Commonwealth Fund, on the recommendation of their Committee on Educational Research, author-

ized a financial grant "for an analytical study of a limited number of outstanding experiments, or courses, in the social studies in our school systems. The Commonwealth Fund entered into an agreement with the National Council for the Social Studies according to which the treasurer of the National Council would undertake to supervise the disbursement of the funds appropriated. Professor J. Montgomery Gambrill of Teachers College, Columbia University, accepted an invitation to undertake the investigation.

The investigation began with a preliminary inquiry through the medium of an informal letter sent out to about four hundred persons, including all the state superintendents of schools, superintendents of all cities of more than 30,000 population and of representative smaller cities, college and university professors of education, representative normal schools, and to many supervisors, principals, department heads and selected individuals. The returns were studied and collated, after which Professor Gambrill made a series of trips during which the following states were visited: New York, Massachusetts, Pennsylvania, Maryland, Ohio, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Colorado, California, Oregon and Washington. The report is based upon records of personal observation and conference during these journeys and upon all available documentary material, including much that is in manuscript, some of it especially prepared for the purpose.

The term "experimental" has been used in a very broad sense, without much regard to its strictly scientific meaning. The more ambitious and comprehensive undertakings were described but also examples of other typical unconventional work. In order to keep the report within practicable limits it was found necessary to restrict its scope to curriculum-making for junior and senior high schools and to programs aiming to unify and make continuous the work of the twelve grades. The latter, however, fairly well illustrate the features that would appear in a special chapter on courses for elementary schools. It was recognized that little if anything could be found that is "new" in the sense of being unprecedented. No historical treatment of present tendencies and issues was attempted, the report undertaking merely to describe, in objective fashion, representative departures from conventional practice.

The following outline will indicate more definitely the subjects treated in the report:

I. Social Studies in the University High School of the University of Chicago.
   1. The Course of Study.
   2. Procedure for Study and Teaching.
   3. Adjustment to Individual Differences of Pupils.
   4. Composite Course in Civics and English.

II. A "Unified Social Science Curriculum."
(Proposed by Prof. H. O. Rugg, Lincoln School of Teachers College, Columbia University.)
   1. Principles and Procedure.
   2. Building the Course of Study.
   3. Characteristic Features of the Course.
   4. Psychological Experiment and Adjustment to Individuals.

III. A Composite Course for the Junior High School.
(Proposed by Dean L. C. Marshall and Associates.)
   1. Development of the Plan.
   2. How the Materials are Selected and Organized.
   3. The Program for the Junior High School.

IV. A Project to Construct Scientifically a Fact Course in the Social Studies for the grades.
(Undertaken by Superintendent Carleton W. Washburne and the "Winnetka Social Science Seminar.")
   1. The Statistical Investigation.
   2. How the Course of Study was made.
   3. Some Questions Suggested.

V. "Vertical Supervision" and a Continuous Program for the Twelve Grades.
   1. The State Program of Pennsylvania.
   2. Oakland, California.
   3. Detroit, Michigan.

VI. Pupil "Activities" and Community Contacts.
   1. The Minneapolis Plan.
   2. Community Civics Through Practical Investigations.
      (Fresno, California.)
   3. Community Organization in Class and School.
      (Rochester, New York.)
   4. Theory and Practice of School Citizenship.
      (Long Beach, California.)

VII. Some Types of Composite Organization.
1. The Project as a Basis for Curriculum Organization.
2. "Job Analysis" for Courses that "Function in Real Life." (University High School, University of Missouri.)
3. World History as a Basis of Integration.
A Composite Course for Grades VII and VIII. (Proposed by Dr. D. C. Knowlton, Lincoln School, Teachers College, Columbia University.)
A Minimum Composite Course in One Year. (Mission High School, San Francisco.)

The report of the investigation was published in the December, 1923, and January, 1924, issues of the *Historical Outlook*, and has since been republished in pamphlet form by the McKinley Publishing Co., Philadelphia. Professor Gambrill also prepared an analytical summary with some additional details which was published in the *Historical Outlook*, February, 1924, under the title "Some Tendencies and Issues in the Making of Social-Studies Curricula."

COLLEGE NEWS

TRUSTEES

The Trustees of Teachers College, at their meeting on Thursday, February 14, approved the following promotions:

Faculty of Education

Franklin W. Johnson, A.M., L.H.D., from Associate Professor to Professor of Education.

Edward H. Reisner, Ph.D., from Associate Professor to Professor of Education.

Arthur I. Gates, Ph.D., from Associate Professor to Professor of Education.

Paul R. Mort, A.M., from Associate to Assistant Professor of Education.

Faculties of Education and Practical Arts

Charles H. Farnsworth, Mus. D., from Associate Professor of School Music to Professor of Music Education.

Faculty of Practical Arts

Hermann T. Vulté, Ph.D., from Assistant Professor of Household Arts to Associate Professor of Household Chemistry.

Lois C. Mossman, A.M., from Instructor in Practical Arts Education to Assistant Professor of Education.

The following new appointment was announced:

Peter W. Dykema, Visiting Professor of Music Education, with a seat in the Faculties of Education and Practical Arts.

The Budget for the fiscal year 1924-25, for the maintenance and operation of Teachers College, its Schools and its Dormitories, amounting to $2,778,653, was adopted by the Board.

Leaves of absence for 1924-25 have been granted to the following named members of the Faculties: For the entire year: Professor Charles H. Farnsworth; for the Winter Session: Professor Patty S. Hill; for the Spring Session: Professors N. L. Engelhardt, Henry A. Ruger, William C. Bagley, E. W. Bagster-Collins, Grace A. Cornell, Willystine Goodsell, Mary S. Rose.

By the Will of the late Miss Augusta Larned, of Summit, N. J., Teachers College has received a bequest of $10,000 to create a Scholarship for the purpose of "aiding some worthy girl to obtain an education." The Trustees have accepted the bequest and established the "Augusta Larned Scholarship," to be awarded annually at the discretion of the Faculties. In accordance with the terms of the bequest, the Scholarship will be open only to women.

EDUCATIONAL ADMINISTRATION

A Score Card for High School Buildings, by G. D. Strayer and N. L. Engelhardt, was issued in January by the Bureau of Publications, Teachers College, Columbia University. This score card is the third in a series on school buildings by the same authors, the other two being "A Score Card for Elementary School Buildings" and "A Score Card for Village and Rural School Buildings of Four Teachers or Less." The Bureau of Publications has also issued the bulletin of standards to accompany the high school score card which has been prepared by the same authors. This bulletin is a 75-page document. Besides covering standards for site, building, service systems, classrooms, special rooms, general service

rooms and administration rooms, the bulletin also contains a bibliography on the high school buildings. The pamphlet is illustrated with diagrams and carries significant tabular matter.

The report on the Survey of Certain Aspects of the School System of Springfield, Mass., was presented to the School Committee of Springfield on January 12th by Drs. George D. Strayer and N. L. Engelhardt. The report will be printed by the School Committee. The sections of the report which have been prepared by faculty members assisted by students are as follows: Chapter I. "The Organization and Administration of Public Education," by G. D. Strayer and N. L. Engelhardt, assisted by I. M. Allen, L. J. Bennett, G. E. Carrothers, Fred Engelhardt, Frederick Emmons, Harry Ganders, A. M. Goldberger, John Granrud, H. C. Olsen, F. R. Rogers, H. M. Schwartz, R. E. St. Clair, Lewis Wagenhorst and P. E. Zimmers. Chapter II. "The Financing of Public Education in Springfield," by N. L. Engelhardt and J. R. McGaughy, assisted by Julian Archer, J. S. Brubacher, W. W. Carpenter, Harper Donaldson, Willard Elsbree, A. D. Hollingshead, A. K. Loomis, F. W. Morrison, G. T. Moyers, E. C. Osborne, O. E. Powell, J. M. Robbins, D. B. Timmons, J. L. Tombaugh and L. W. Weisel. Chapter III. "The Curriculum." "The Kindergarten—First Grade Curriculum," by Patty S. Hill and Mary M. Reed, assisted by E. Mae Raymond, Ruth Bestor, Edith Conard, and Olive Paine; "The Elementary School Curriculum," by F. G. Bonser, assisted by Ione Dunn, J. K. Flanders, Jane Gilbert, and Margaret Marshall; "The Secondary Schools of Springfield," by T. H. Briggs, assisted by S. G. Brinkley, H. B. Bruner, F. D. Curtis, B. W. Daily, W. Farrell Dyde, M. P. Gaffney, A. L. Hall-Quest, T. S. Montgomery and M. N. Woodring.

Field work in connection with the Providence, R. I., Survey was begun by Dr. George D. Strayer and Dr. N. L. Engelhardt in January, assisted by a group of students. This survey will include the following aspects of the local education problem: I. A Study of the Administration of the Schools—relation of the school administration to the municipal administration; the fiscal control of the school system; the present administration of the schools in terms of the work of the professional executive officers, the activities of the school committee, and the relation of the professional staff to the committee. II. A study of the Financing of the Schools of Providence—a comparative study which would seek to discover the ability of Providence as compared with other American cities to finance the educational program; a study of costs with a view to discover whether or not it is possible to effect economies; a study of the cost of education in relation to other governmental costs; a study of present distribution of money spent for education among the major items of expenditure with an inquiry which would seek to discover whether or not an excessive part of the total amount is spent for any one of these items. III. A Study of the Present School Plant and the Development of a School Building Program—a careful survey of the school buildings now in use with a view to discovering whether or not they are being used to capacity, and how adequate they are for the purposes for which they are now employed; a population study of the City of Providence by wards, election precincts, or other divisions in order to discover shifts and trends of population over a period of years as a basis for forecasting the needs for school buildings for the next fifteen years; a careful study of the regional location of school buildings to be erected during the period of the next fifteen years, and a recommendation with respect to the type of building to be erected in the light of the educational program to be developed and a consideration of the best methods of financing such a program.

Members of Education 403-4 have

participated, under the direction of Dr. N. L. Engelhardt, in the analysis of the school buildings of Grantwood, N. J.

An article by Dr. N. L. Engelhardt on "School Building Programs in Their Application to Smaller Communities" appears in the January 1924 number of the *American City Magazine*.

Dr. G. D. Strayer spoke on the "Education Bill" before the Women's Republican Club of Massachusetts on January 24th at the Copley-Plaza Hotel in Boston.

ELEMENTARY EDUCATION

Mr. Howard Nudd, Secretary of the Public Education Association of New York, spoke at an open meeting of the Elementary Club on Tuesday evening, December 18. Mr. Nudd explained the work of the Association and discussed some current educational problems in New York City. An informal reception followed.

On December 28 Dr. Hillegas addressed the State Teachers Association of New Jersey in Newark.

Dr. Charles L. Spain, Deputy Superintendent of Schools in Detroit, spoke before the Major Course in Elementary Education on January 15 on the Platoon School System in Detroit. He also exhibited a series of motion pictures recently made in Detroit to explain the value of the Platoon System to that city.

Superintendent E. C. Hartwell of Buffalo, New York, addressed the Major Course on January 22. Mr. Hartwell presented a unique plan for the training of teachers in service.

Dr. McMurry resumed his work at the College at the opening of the Spring Semester after his half year's absence from the institution.

ENGLISH

Professor Franklin T. Baker sailed January 29, via the Panama Canal, for Los Angeles, where he will lecture during the present term in the Southern Branch of the University of California. He will give courses in the University of Washington during the summer, and return to Teachers College for the opening of the Winter Term.

EDUCATIONAL SOCIOLOGY AND VOCATIONAL EDUCATION

On January 17 Professor Snedden gave three addresses before the Vocational Education Association of the Middle West, at its St. Louis Convention. He also addressed the Teachers Institute of Sunbury, Pennsylvania, on January 28.

Dr. Arthur F. Payne has been appointed Consulting-Editor of a series of vocational texts to be published by the McGraw-Hill Publishing Company. The first of the series will be Dr. Payne's own book, "Administration of Vocational Education," which will be ready for distribution about the first of April.

The Century Company announces the publication in two volumes of Professor Snedden's *Educational Sociology*. The first volume is entitled "Sociology for Teachers"; and the second volume is "Educational Applications of Sociology."

Edward Evans & Sons, Ltd., Shanghai, announces the publication of "Civics, An Inductive Study Socially Developed of the Elements of Community Welfare in China, Part I," by Mr. D. H. Kulp 2d.

In December, Mr. Kulp addressed the annual session of the International Association of Agricultural Missions on "Rural Life in China." He presented a paper at the Educational Sociology Section of the American Sociology Society in Washington on "Some Educational Implications of the Modern Trends in Neighborhood and Community."

He has also recently addressed the Mercer County Farm Bureau in annual session at Trenton, N. J., on "The Evaluation of Country Life," and the annual meeting of the Girls' Welfare

League of Worcester, Mass., on "Understanding the Unadjusted Person."

HOUSEHOLD ECONOMICS

Mr. Shelby M. Harrison, of the Russell Sage Foundation, Lecturer in Household Economics, gave a paper before the American Sociology Society's recent Convention at Washington on "A Method for Estimating the Future Growth of Population." Mr. Harrison was appointed a member of the National Council of Social Research which held its first meeting at Chicago in February.

Dr. Emma A. Winslow, lecturer in the Summer Session, has been working for several months on the staff of the New York State Commission of Housing and Regional Planning and has had a responsible part in preparing the reports of the Commission on the present status of the housing emergency in New York State. It is on the basis of this report that Governor Smith of New York has recommended the extension of the rent laws for two more years and "the introduction of two constitutional amendments, one of which will enable the state to establish housing credits and another to enable cities and counties to deal with their housing problems in a similar way."

Professor Andrews was recently invited by President William M. Lewis of George Washington University, Washington, D. C., to make a survey of that institution with regard to the possibility of further developing the department of home economics. The University is inaugurating a program of building and development under which it promises to take a larger place among national institutions. Of the 10,000 college and university students in Washington, over half are in George Washington University and of its students 46 per cent are women students. This makes an unusual opportunity for the development of a university department of home economics, particularly through coöperation with the research work in government departments in Washington and in national agencies which carry on research related to the home.

MATHEMATICS

Mr. W. D. Reeve, formerly Professor in the School of Education, of the University of Minnesota, has been appointed Associate in the Department of Mathematics, beginning with February 1st.

Professor David Eugene Smith has been elected Secretary of the History of Science Society.

PHILOSOPHY OF EDUCATION

Professor Wm. H. Kilpatrick spoke to the Vocational Section of the New York State Teachers' Association in Albany on November 27.

Dr. Kilpatrick attended the meeting of the Pennsylvania State Teachers' Association in Philadelphia, December 26, speaking to the Department of Superintendence and to the Department of College and Teacher Training.

Dr. Kilpatrick gave a series of lectures to the Teachers' Associations of St. Paul and of Minneapolis the week of January 28 to February 1, lecturing daily to each group. On this trip he spoke also to the School of Education and to the Schoolmasters' Club in Cleveland and to the faculty of the State Normal School in Milwaukee.

SECONDARY EDUCATION

The Bureau of Publications has recently issued as No. 135 of the Contributions to Education Dr. William Sims Allen's dissertation, *A Study of Latin Prognosis*. Dr. Orlie M. Clem's continuation of the study of this problem is now in press. Both studies were undertaken as a part of the investigation of the American Classical League.

The Secondary Group meeting for January was conducted by Professor Alfred M. Hall-Quest, who led a discussion on supervised study in the high school. The March meeting was devoted to intelligence tests and their uses

in secondary schools, Professor Pintner supplying the technical information desired. It is significant that five-sixths of the members of the group have used one or more forms of intelligence tests to aid in the classification of incoming pupils.

The major professional course for high school principals recently spent an entire morning inspecting the records of the Service Bureau for Classical Teachers. Miss Sabin explained the work of the Bureau and what it is prepared to furnish.

In the summer school of 1923 a committee of the class in the Organization and Administration of the Junior High School prepared an annotated list of supplementary references for use in the teaching of science. This report is being published in several numbers of *The Junior High School Clearing House*, beginning with December.

In the *Classical Journal* for February is "Some Comments on Professor Nutting's 'Taking the Measure of Latin,'" by Professor Briggs. Ginn and Company has recently published for Professor Briggs and Miss Isabel McKinney *Ways to Better English*.

On January 9 Professor Briggs represented the National Education Association at a meeting of a committee of the American Council of Education. He was there appointed chairman of a subcommittee to prepare a set of standards for teacher-training colleges.

Professor Franklin W. Johnson addressed the junior high school teachers and principals of Boston on Wednesday, January 16.

In the *National Survey of Recreation Camps* made by the Playground Association of America now in press, Professor Fretwell contributed the chapter on the training of camp leaders.

Professor Sarah M. Sturtevant represented Teachers College at the Annual Conference of the North Atlantic Section of the American Association of University Women at New Haven, Connecticut, February 15-17. The meetings emphasized the broad scope of the work of the A. A. U. W. and showed especially the interest of the Association in international relations. The delegates were most cordially welcomed and delightfully entertained.

On the committee of educators called together at Washington, D. C., February 5-6, by the American Red Cross was Professor Fretwell. The committee met to consider the relation of secondary schools and the Junior Red Cross.

Mr. Charles F. Smith is the author of *Games and Recreational Methods for Scouts, Camps, and Clubs* now in press with Dodd, Mead & Company. The chapter on Recreational Leadership is by Professor Fretwell.

On the evening of February 13 the Advisers Club joined with the Secondary Education Club in entertaining Dr. Lucy L. W. Wilson, Principal of the South Philadelphia High School for Girls. Dr. Wilson addressed the meeting on the Volkschule of Denmark which she had an opportunity to study while in Denmark last summer. Members of the Advisers Club, which was formed in connection with Professor Sturtevant's course in Problems of Advisers of Women and Girls for the weekly discussion of practical problems, visited Dr. Wilson's very live and interesting school several months ago.

Mrs. Annie M. Fertig, President of the Advisers Club, entertained Dr. Wilson, Professor Sturtevant, Miss Wanger, and the Executive Committee of the Advisers Club at a dinner at the Faculty Club, February 13.

During January and February Professor Fretwell has spoken for teachers associations in Norristown and Indiana, Pennsylvania; Lewiston, Maine; Rye, New York; Plainfield, New Jersey; and the junior and senior high school English teachers of New York City.

ALUMNI ACTIVITIES

THE TEACHERS COLLEGE ALUMNI ASSOCIATION

OFFICERS

President: Dr. GEORGE H. REAVIS, Dean, School of Education, University of Pittsburgh, Pittsburgh, Pa.

1st Vice-President: Dr. FANNIE W. DUNN, Assistant Professor of Education, Teachers College.

2nd Vice-President: Miss LILLIAN HUDSON, Assistant Professor of Nursing Education, Teachers College.

Recording Secretary: Miss AGNES BURKE, Instructor, Kindergarten Education, Teachers College.

Corresponding Secretary: Miss EDITH E. SWAN, Executive Secretary, Student Organizations, Teachers College.

Treasurer: Dr. R. G. REYNOLDS, Director, Bureau of Educational Service, Teachers College.

Members-at-Large: Dr BESSIE LEE GAMERILL, Assistant Professor of Elementary Education, Yale University, New Haven, Conn.

Dr. EDWARD S. EVENDEN, Professor of Education, Teachers College.

Alumni Trustees: Dr. A. B. MEREDITH, Commissioner of Education, Hartford, Conn.

Miss ROXANA STEELE, graduate student, Teachers College.

Alumni Office: RUSSELL HALL, Teachers College, 525 West 120th Street, New York City.

Address all communications to Rollo G. Reynolds, Field Secretary, Teachers College, New York City.

ALUMNI NEWS

The object of this department in the Teachers College Record is to print the news of the Alumni. Because of the wide range of territory over which former students of the College are scattered, it is difficult to collect news of alumni in the field. The Field Secretary has just written to the secretaries of the many local clubs asking their coöperation in securing information about our former students now at work. These local clubs, however, represent but a very small part of our alumni body and therefore an appeal is made to all the alumni to send to the Field Secretary items of news interest about themselves or other alumni.

ALUMNI ELECTION

Nominations have been received and ballots will shortly be sent to all members of the Alumni Association for the election of officers.

The following offices are to be filled:

Alumni Trustee
First Vice-President
Recording Secretary

The ballot will contain the names of those who have been regularly nominated for these offices. Each member of the Association is entitled to vote.

During the past three years an increasing interest in the alumni election has been shown by members of the Association. Every member should take advantage of the opportunity to vote for officers. Especially important is the selection of the Alumni Trustee.

Members of the Association are urged to mark their ballots as soon as they are received. They *must* reach Teachers College not later than March 26.

THE ALUMNI CONFERENCES

The Annual Conferences of the Teachers College Alumni Association are to be held at the College on Friday, April 25, and Saturday, April 26.

Plans are already under way to make this one of the finest conferences ever held by the Association. The Executive Committee has formulated the following tentative program:

General Theme of the Conference: "Pressing Problems in Education." Finance, Professionalism, and Internationalism will be the specific topics for discussion in the general meeting Friday afternoon, April 25.

THURSDAY

6.00 P. M. Alumni Council Dinner.

FRIDAY

9–12 A. M. Sectional Meetings.
1.30–2.30 P. M. Business Meeting and reports.
2.30–4.30 P. M. General Conferences—addresses by alumni and faculty.
4.30–6.00 P. M. Dean's Reception.

SATURDAY

9–12 A. M. Sectional Meetings.
12–12.30 P. M. Get Together and Sing—Horace Mann Auditorium.
1–2 P. M. Class or Sectional Luncheons.
2 P. M. Sectional Meetings, if desired.

The programs for the group sections are being prepared by the respective group chairmen. The following groups will hold conferences:

Administration and College Teachers of Education: chairman, Mr. Henry D. Hervey, Superintendent of Schools, Little Falls, N. Y.

Advisers of Women and Girls: chairman, Edith A. Barnard, Dean of Women, State Teachers College, Maryville, Mo.

Elementary Education: chairman, Dr. Margaret Noonan, 32 Waverly Place, New York City.

Fine Arts: chairman, Professor Charles J. Martin, Fine Arts Department, Teachers College.

Household Arts: chairman, Miss Jessie Long, Director of Commonwealth School, 136 East 55th Street, New York City.

Lower Primary Education: chairman, Miss Edith N. Conard, Kindergarten Department, Teachers College.

Music: chairman, Mr. Louis West, 233 Bergen Street, Brooklyn, N. Y.

Normal School Education: chairman, Dr. Charles E. Benson, School of Education, New York University, Washington Square, N. Y. City.

Nursing and Health: chairman, Miss Elizabeth Burgess, Teachers College.

Physical Education: chairman, Miss Marguerite L. Smith, 21 West 122nd Street, New York City.

Rural Education: chairman, Miss Rosamond Root, Teachers College.

Religious Education: chairman, Mr. Goodwin Watson, 420 West 119th Street, New York City.

Secondary Education: chairman, Mr. George L. Bennett, Principal of High School, Yonkers, N. Y.

History and Social Science: chairman, Dr. Henry Johnson, Teachers College.

English: chairman, Mr. Allan Abbott, Teachers College.

Science: chairman, Mr. Earl R. Glenn, Lincoln School, Teachers College.

Mathematics: chairman, Mr. C. B. Upton, Teachers College.

The complete program of the Conferences will be mailed shortly to every member of the Alumni Association.

Save the dates—April 25, and April 26—and come back to Teachers College. The faculty, old friends, new ideas, the new library, Russell Hall,—all these we hold out as inducements to you.

MEETINGS OF TEACHERS COLLEGE GROUPS IN THE SOUTH

In December, Miss Emma Gunther of the Teachers College faculty met with several groups of former Teachers College students in Alabama and Georgia. This trip was arranged by the Alumni Association with the cordial coöperation of former students in the south and is part of a program which the Association has undertaken to arrange for a closer relationship between the College and its graduates at work in the field.

Birmingham, Alabama

The dinner meeting of Teachers College alumni was held at Tutwiler Hotel, December 12, with Miss Virginia Hanson as toastmistress. A regularly organized Alumni Club had not been formed in Birmingham until this meeting when Mr. I. R. Obenchain, Principal of Glen Iris School, was made president, and Miss Grace Miller of Lakeview, secretary. The large group included representatives from Birmingham Southern College, Assistant Superintendent Mr. L. F. Banks, and principals from high schools. Dr. C. B. Glenn, Superintendent of City Schools, who, though not an alumnus, expressed in his introduction of Miss Gunther, his appreciation of the fine coöperation that Teachers College has shown in educational efforts in the South.

Montgomery, Alabama

The response to the meeting of the Teachers College alumni on December 10 at Gay-Teague Hotel was a hearty one. The carefully thought-out appointments of the dinner-conference were under the direction of two of the County's representatives, Miss Cora Pearson, Supervisor of Elementary Schools, and Mr. A. F. Harmon, County Superintendent, who acted as chairman of the meetings. Mr. R. E. Tidwell, Assistant State Superintendent, and Mr. W. L. Spencer, State Supervisor of Secondary Schools, represented the State Department. News of the College was brought to the group by Miss Gunther, who had had an opportunity the three previous days to visit and meet teachers of the city of Montgomery and of Montgomery County.

Atlanta, Georgia

The dinner of the Teachers College Alumni Association was held in the Woman's Club Building on December 19 with Mr. W. Reid Hunter, Assistant Superintendent of the Atlanta Public Schools, presiding. Arrangements for the dinner were in the hands of Miss Jessie Muse, Principal of the Girls' High School. The group numbered about sixty. Mr. Daniel, President of the Board of Education, presiding officer, introduced Miss Gunther. In order to show the unusual coöperation that the Atlanta schools feel they have with other organizations, the presidents of the Parent-Teachers Association, Mothers' Council, Woman's Club, and other guests were invited. All presented in short addresses interesting facts regarding the group coöperation and hearty response between schools and the outside agencies represented. Among the guests were Miss Emma Wesley, Principal of the Normal School, and Mrs. Annie Wise, Principal of the Commercial High School.

Macon, Georgia

On the afternoon of December 18 a very interesting group met for luncheon in the high school. The forty-four alumni of Teachers College at Macon were present. The 100% attendance record was due in very large part to the work of Miss Agnes Barden, Supervisor of Primary Grades; Mrs. Ferrill,

Elementary Supervisor; Mrs. S. D. Jones, Principal of the Gresham School; and Mrs. Rosa Taylor, Principal of the Whittle School. The luncheon was prepared and served by the girls of the Household Arts Department and the speaker, Miss Gunther, was introduced by the Principal of the Lanier High School, Mr. Walter P. Jones.

Columbus, Georgia

A group of Teachers College alumni met in the Library at Columbus, Georgia, on Saturday, December 16, with Miss Gunther as guest. Miss Lillian Griffith, Instructor of French in the High School, acted as chairman.

Superintendent Daniel of the Columbus City Schools was a guest. Later he presented pictures and plans of several new school buildings which have just been reconstructed and also took great delight in showing the Industrial High School which had been dedicated sixteen years ago by Dean Russell.

Miss Gunther also met informally with alumni groups at Milledgeville, Georgia, and Montevallo, Alabama.

TEACHERS COLLEGE GET-TOGETHER IN MONTANA

At the Eastern Montana Section of the State Educational Association, a group of Teachers College alumni got together for a luncheon. The toastmaster was Superintendent E. C. Bussert of Forsyth. Superintendent R. H. Brown of Glendive gave a talk on "Teachers College of Today"; State Superintendent, Miss May Trumper of Helena, spoke on "Teachers College in Montana"; and Dr. Henry Suzzallo, President of the University of Washington, gave a talk. Each of the ten alumni wrote his or her name on the back of the menu and sent it with greetings to Dean and Mrs. Russell with the statement that "Teachers College spirit lives out here. We are trying to pass on to others a little of what you and Teachers College have given to us."

WEST VIRGINIA TEACHERS COLLEGE CLUB

The annual meeting of the West Virginia Teachers College Club was held in Wheeling at the time of the meeting of the West Virginia Educational Association. Saturday, December 1, the Club had a breakfast at the Mel-R Garden tea room. About sixty members were present. Miss Besse Anderson, President of the Educational Association and teacher in Parkersburg High School, Parkersburg, W. Va., was elected president. Miss Wilma C. Speare, teacher at Marshall College, Huntington, W. Va., was elected secretary-treasurer.

WESTERN PENNSYLVANIA CLUB

On November 10, Mr. R. J. Leonard, the newly appointed Director of the School of Education, visited the city of Pittsburgh and the University of Pittsburgh, in answer to an invitation extended to him by the Teachers College alumni of Western Pennsylvania, and particularly by the Teachers College Club, representing the alumni connected with the University of Pittsburgh.

A luncheon was served in the Faculty Club of the University at which twenty-five people were present. At the close of the luncheon Dr. Leonard presented in a brief talk the new enterprises which have been undertaken by Teachers College. He spoke of the extension work which has reached not only through Europe and into Asia, but even into other more inaccessible and less understood sections of the world. Coupling these descriptions with other work of the new Research Department and adding many facts regarding the local work of Teachers College and the changes which are now being made or contemplated for the near future, Dr. Leonard pictured for the members of the Association a most comprehensive view of the

extent and character of the work sponsored by Teachers College.

VIRGINIA CLUB

Dr. George D. Strayer was the guest of honor at the annual dinner of the Virginia Alumni Club of Teachers College, held in Richmond, November 29, 1923.

The speaker addressed an audience of intensely interested men and women who, each year, look forward to this gathering for first-hand news from their Alma Mater. The completion of the new library together with accounts of the work of many well-known instructors were the chief items of interest.

The meeting, though intensely interesting, was far too short, due to a game of football to which the guest was hustled away in a great hurry in order to get a "first seat."

There were fifty members present. The retiring president, Miss Charlotte D. Wray, presided. Mr. W. D. Ellis introduced the speaker. After election of officers the meeting was adjourned. New President: Mr. A. P. S. Robinson, James Madison School, Norfolk, Va. New secretary-treasurer: Mr. C. B. Givens, 4010 West St., Richmond, Va.

CALIFORNIA CLUB

The Los Angeles chapter of the Teachers College Alumni Association had its last business meeting December 19. Dr. William Bagley of Teachers College was the guest and principal speaker. Fifty-five alumni and former students of Teachers College were present. The following officers were elected:

President: Dr. Lester B. Rogers, Dean of the School of Education, University of Southern California.

Vice-President: Dr. C. H. Robison, Assistant Professor of Education, University of California, southern branch.

Secretary-Treasurer: William E. Nicholl, Dean of Pomona College, Claremont, California.

Commissioner at Large: Miss Hazel Irene Aldrich, Supervisor of Grades Five and Six in the Los Angeles Schools.

MISSOURI TEACHERS COLLEGE CLUB

The annual meeting of the Missouri State Teachers College Club was held in connection with the meeting of the Missouri State Teachers Association at St. Louis, on Thursday evening, December 6. At 6.30 the former students of the College gathered at the Hotel Claridge for dinner. Dr. J. J. Oppenheimer of Stephens College, who is president of the Association, acted as toastmaster. The dining room was attractively decorated and a large group of former students was present. At the speakers' table were Dr. J. J. Oppenheimer; Dr. Mervin Gordon Neal, Dean of the School of Education, University of Missouri; Dr. Paul Monroe, Director of the International Institute, Teachers College; Mr. John J. Maddox, Superintendent of Schools, St. Louis, Mo.; Mrs. Maddox; Dr. Fannie Dunn, Assistant Professor of Education, Teachers College, and vice-president of the Alumni Association; Dr. William G. Bagley, Professor of Education, Teachers College; Miss Ella Z. Dobbs, Associate Professor of Industrial Arts, University of Missouri; Miss Gail Harrison, formerly of the Lincoln School, Teachers College; and Dr. R. G. Reynolds, Field Secretary of the Alumni Association and Director of the Bureau of Educational Service, Teachers College.

After singing Teachers College songs, the group turned to the program of the evening.

Dr. Reynolds read to the group an interesting letter of greeting from the Missouri Club at Teachers College, signed by H. J. Magee, president of the Club.

Dr. Reynolds then discussed briefly some of the new plans for the Alumni Association.

Superintendent Maddox, of the city schools in St. Louis, was next introduced and gave a splendid talk during which he stated that the big things going on educationally in Missouri and St. Louis were due specifically to the influence of Teachers College.

Dr. Paul Monroe was then called upon. He, in a most happy vein, told of some of the new developments of The International Institute. In showing the growth of the College, Dr. Monroe stated that there were more foreign students in Teachers College this year than there were students in the whole College when he joined the teaching staff. The problem which the Institute faces is to give these foreign students the kind of instruction which they should have, lacking as they do the background of knowledge concerning American school conditions. This background the Institute is attempting to provide. Dr. Monroe told, in a most interesting manner, of the influence which Teachers College is having in other lands. He also related some of his experiences abroad and said that while recently in China he saw the first foreign student who ever studied at Teachers College. At the present time there are two hundred natives who are alumni of Teachers College at work in China. Among them are the heads of two national universities holding the doctor's degree from Teachers College. The College may well be proud of their work in China.

In conclusion Dr. Monroe gave the alumni some idea of the organization of the Institute, telling of the new type of instruction which is being given foreign students at the College; the calls from foreign fields for investigation by the Institute; and the visitation of schools by groups of foreign students now in residence.

Dr. Fannie Dunn then gave a splendid talk in which she stressed the need of financial support for rural schools and especially of normal training for rural school teachers.

Miss Gail Harrison spoke relative to the strides that are being made in the education of very young children.

Dr. Neale of the University of Missouri outlined for the group some of the improvements which had been made in the State of Missouri and appealed to the former students of Teachers College to work together in the solution of the problems which are still facing the State.

The last speaker on the program was Dr. Bagley who, in a delightful manner, stated that he had reversed the usual process. He said that he came to Missouri where he got his inspiration and then went to Teachers College with it. He related how his early experience in the St. Louis schools led him into the paths of preparing teachers for normal school work.

The meeting was a most enthusiastic one and the Missouri group was especially delighted to have so many representatives of the College present. At the close of the dinner the election of officers for 1923-24 was held and the following slate was reported: President, Miss Mary Pennell, Assistant Superintendent of Schools, Kansas City, Mo.; First Vice-President, Mr. B. W. Loomis, State Teachers College, Maryville, Mo.; Second Vice-President, Mr. H. U. G. Turnmire, Superintendent of Schools, Bowling Green, Mo.; and Secretary-treasurer, Miss Alice Cusack, Kansas City, Mo.

ALUMNI APPOINTMENTS RECENTLY REPORTED

Atwater, Ruth, Professor of Foods and Nutrition, Skidmore College, Saratoga Springs, N. Y. [Miss Atwater's appointment was incorrectly stated in the January RECORD.]

Jackson, Maude, Assistant Manager, Colonnade Food Company, Louisville, Ky.

Jackson, Thorstena S., Teacher of French, High School, Montclair, N. J.

Johnson, Adelaide I., Instructor in Education, State Teachers College, San Jose, Calif.

Johnson, B. Eleanor, Head of Clothing Department, the Stout Institute, Menomonie, Wis.

Johnson, George A., Supervising Principal, Colored Elementary Schools, Fort Smith, Ark.

Johnson, Madge, Instructor in Home Economics, University of Arkansas, Fayetteville, Ark.

Johnston, Edgar G., Vice-Principal, Senior High School, San Diego, Calif.

Jones, M. Adele, Dean of Women, Bellingham State Teachers College, Bellingham, Wash.

Jones, Lenore, Elementary Principal, Elementary School, Mobile, Ala.

Jones, Margaret, Home Economics, State Normal School, Towson, Md.

Jordan, A. M., Professor of Educational Psychology, University of North Carolina, Chapel Hill, North Carolina.

Joslin, Julia E., 4th grade critic, State Normal School, Kalamazoo, Mich.

Keating, Madeline, Supervisor of Art, Vanderlip School, Scarborough, N. Y.

Kinder, J. S., Head, Department of Education and Psychology, Pennsylvania College for Women, Pittsburgh, Pa.

Kipp, Louise, Lecturer, Home Economics, University of Texas, Austin, Tex.

Kirk, James W., Teacher of History, High School, New Rochelle, N. Y.

Kneip, Helena, Kindergarten Director, Community School, St. Louis, Mo.

Kopp, C. L., Principal, Cumberland High School, Cumberland, Md.

Kready, Laura Fry, Professor of English, State Normal School, Bloomsburg, Pa.

Lesslie, Jessie, Director of Teacher Training, Central High School, Tulsa, Okla.

Lockwood, Helen E., Director of Home Economics Department, State Normal School, Farmington, Me.

Loesch, Mary, Supervisor of Kindergarten-Primary, Chicago Teachers College, Chicago, Ill.

Long, Kathryn M., Assistant Professor of Education, State A. & M. College, Stillwater, Okla.

Lutz, Mary T., Kindergarten Critic, Normal School, Flagstaff, Arizona.

Malherbe, Ernst G., Psychologist and Supervisor, The Foxwood School, Flushing, Long Island.

March, Lindsay J., Principal, Foxcroft Academy, Dover-Foxcroft, Me.

Markham, Julia Ann, Principal of Elementary School, Bronxville, New York.

Martin, Cora M., Professor of Primary Education and Primary Supervisor, El Paso Junior College and Public Schools, El Paso, Tex.

Matson, Laura A., Study Room Supervisor, Montclair High School, Montclair, N. J.

Man, Clayton C., High School Instructor, Geneseo State Normal School, Geneseo, New York.

Meacham, Leta M., Teacher of Clothing, Lindenwood College, St. Charles, Mo.

Melville, Norbert H., Department of Psychology, New Jersey State Normal School, Trenton, N. J.

Melvin, Arthur G., Professor of Psychology and Education, Illinois College, Jacksonville, Illinois.

Merrill, Marie, First Grade, Elementary School, Bronxville, N. Y.

Metcalf, Bertha O., Ungraded Class Teacher, Public School No. 132, Manhattan, Wadsworth Avenue and 182nd Street, N. Y. City.

Michaels, Ruth, Assistant Professor of Home Economics Education, University of Pennsylvania, and Drexel Institute, Philadelphia, Pennsylvania.

Miller, Chester L., Principal, Garfield School, Cincinnati, Ohio.

Miller, Mildred, Elementary Supervisor, Public Schools, Cleveland Heights, O.

Monceret, Marceline, Teacher of French, Technical High School, Springfield, Mass.

Morehart, C. C., Assistant Professor of Education, Syracuse University, Syracuse, N. Y.

Morris, Elizabeth, Assistant Professor in Psychology and Education, State College for Teachers, Albany, N. Y.